

149

FACILITY FORM 602

(ACCESSION NUMBER)

(THRU)

25

(PAGES)

(CODE)

NASA-CR-124744

(NASA CR OR TMX OR AD NUMBER)

(CATEGORY)

34

1030-30

# ABBREVIATIONS AND ACRONYMS GUIDE

Unclas  
11228

N72-14960

(NASA-CR-125431) ABBREVIATIONS AND  
ACRONYMS GUIDE (Jet Propulsion Lab.)  
1 Oct. 1971 25 p

Compiled  
by  
The Office of  
The Assistant Laboratory Director  
for Technical Divisions  
and  
The Technical Information and Documentation Division

Reproduced by  
**NATIONAL TECHNICAL  
INFORMATION SERVICE**  
Springfield, Va. 22151



JET PROPULSION LABORATORY  
CALIFORNIA INSTITUTE OF TECHNOLOGY  
PASADENA, CALIFORNIA

October 1, 1971

G3/34

## PREFACE

A selected list of abbreviations and acronyms in use throughout the Jet Propulsion Laboratory has been compiled as a ready reference guide. This compilation includes:

1. NASA AND JPL facilities and organizations
2. Federal Government agencies
3. International organizations
4. Engineering and scientific associations and societies
5. Commercial organizations
6. Words and phrases with technical and financial applications.

Abbreviations and Acronyms are used to save space and to avoid distracting the reader by a needless spelling-out of repetitious words and phrases. Excessive use, however, should be avoided, and it is obvious that many in this list are complicated and unnecessary but have crept into the system. A term should never be abbreviated unless it is:

- (1) Used repeatedly, or
- (2) more commonly used in abbreviated form, or
- (3) to be established for future reference, or
- (4) to fit limited layout or drawing space

Each abbreviation or acronym should appear in the spelled-out form followed by the short form in parenthesis, at first usage. In any one document only one meaning should be used for a given abbreviation and only one abbreviation for a given term.

Control of this list is vested in the Library. Deletions or additions to be incorporated in subsequent revisions should be either mailed to the JPL Library, Bldg. 111-113 or telephoned to ext. 4407.

AA	Associate Administrator (NASA)	ADRAN	computer function at Cape Kennedy	AHSE	assembly, handling, and shipping equipment
AAAS	American Association for the Advancement of Science	ADS	Advanced Data System	AIAA	American Institute of Aeronautics and Astronautics
AAAS	Automated Attendance Accounting System (JPL)	ADS	advanced data scalar	AIBS	American Institute of Biological Sciences
AAC	automatic aperture control	ADS	Angle Data Subsystem	AIDS	American Institute of Biological Sciences
AAD	Deputy Associate Administrator (NASA)	ADSS	Automatic Data Switching System (DSN)	AID	Associated In-Group Donors
AAFE	Advanced Application Flight Experiments	AE	Building AE, Cape Kennedy (Vehicle Telemetry Laboratory)	AIGS	All-Inertial Guidance System
AAP	Affirmative Action Program (JPL)	A&E	architectural and engineering	AIL	Airborne Instrument Laboratories
AAP	Apollo Applications Program	AEC	Atomic Energy Commission	AILSS	Advanced Integrated Life Support System
AB	acquisition beacon	AEDC	Arnold Engineering Development Center	AIM	analog input module
ABETS	Airborne Beacon Electronic Test Set	AEI	azimuth error indicator	AIME	American Institute of Mining, Metallurgical, and Petroleum Engineers
ABL	Automated Biological Laboratory	AEROSOL	Aerospace Spin-Off Laboratory	AIMP	Anchored Interplanetary Monitoring Platforms
AC	air conditioning	AES	Apollo Extension Systems	AIP	American Institute of Physics
AC	aircraft	AET	actual elapsed time	AIS	Analog Instrumentation Subsystem (DSIF)
AC	Attitude Control Subsystem (S/C)	AFB	Air Force Base	ALARM	Alerting, Long-Range Airborne Radar for Moving Targets
A-C	Atlas-Centaur	AFC	automatic frequency control	ALASKA	Fairbanks, Alaska, NASA STADAN Station
ACCW	alternating-current continuous wave	AFCO	automatic fuel cutoff	ALD	Assistant Laboratory Director
ACE	attitude-control electronics	AFCP	Advanced Flight Control Programmer	ALPS	Advanced Liquid Propulsion Systems
ACE	automatic checkout equipment	AFCRC	Air Force Cambridge Research Center	ALS	advanced lunar studies
ACF	analog computer facility	AFCRCL	Air Force Cambridge Research Center Laboratories		
ACIC	Aeronautical Chart and Information Center	AFETR	Air Force Eastern Test Range		
ACMO	Assistant Chief of Mission Operations				

<b>ACI</b>	Ascension Island (U.S.), NASA MSFN Station	<b>AFFTC</b>	Air Force Flight Test Center (Edwards AFB, Calif)	<b>ALSEP</b>	Apollo Lunar Surface Experiments Package
<b>ACQ</b>	Acquisition Aid Subsystem (DSIF)	<b>AFIDS</b>	Automatic Firearms Identification System (JPL)	<b>alt</b>	altitude
<b>acq</b>	acquisition	<b>AFLC</b>	Air Force Logistics Command	<b>ALTE</b>	altitude error
<b>ACS</b>	Administrative Computing Service	<b>AFMDC</b>	Air Force Missile Development Center	<b>ALU</b>	arithmetic and logic unit
<b>ACS</b>	Analysis Computer System	<b>AFO</b>	announcement of flight opportunity	<b>AM</b>	amplitude modulated
<b>ACS</b>	Attitude Control Subsystem (VOS)	<b>AFOSR</b>	Air Force Office of Scientific Research	<b>AM</b>	amplitude modulation
<b>ACTS</b>	Analog Conditioning and Test System (MCC)	<b>AF/RADC</b>	Air Force Rome Air Development Center	<b>AM</b>	Building AM, Cape Kennedy (S/C Checkout Facility No. 1)
<b>ACTS</b>	Area Communications Terminal Subsystem (GCF)	<b>AFS</b>	Air Force Station	<b>AMC</b>	Aeromedical Monitor Console
<b>ACV</b>	amount of critical view	<b>AFSC</b>	Air Force Systems Command	<b>AMF</b>	Area Maintenance Facility (DSIF)
<b>AD</b>	Deputy Administrator (NASA)	<b>AFSC/SSD</b>	Air Force Systems Command Space Systems Division	<b>AMMP</b>	Advanced Manned Missions Program (NASA)
<b>AD</b>	advanced development	<b>AFWTR</b>	Air Force Western Test Range	<b>AMO</b>	air mass zero
<b>A-D</b>	analog-to-digital	<b>AGARD</b>	Advisory Group on Aeronautical Research and Development	<b>ampl</b>	amplifier
<b>ADA</b>	Angle Data Assembly (DSIF)	<b>AGC</b>	amplitude gain control	<b>AMPS</b>	Adaptive Mode Planning System (computer program)
<b>ADAPS</b>	Automatic Display and Plotting System	<b>AGC</b>	automatic gain control	<b>AMPS</b>	Advanced Maneuvering Propulsion System
<b>ADAPTS</b>	Air-Delivered Anti-Pollution Transfer System	<b>AGCM</b>	Automatic Gain Control Calibration (computer program)	<b>AMPSIN</b>	AMPS Input (360/75 computer program)
<b>ADC</b>	Analog-to-Digital Converter Assembly	<b>AGCP</b>	Automatic Gain Calibration Program	<b>AMR</b>	altitude-marking radar
<b>ADF</b>	automatic direction finding	<b>AGE</b>	aerospace ground equipment	<b>AMS</b>	Aerospace Material Specifications
<b>ADP</b>	automatic data processing	<b>AGN</b>	additive gaussian noise	<b>AMTD</b>	automatic magnetic tape dissemination
<b>ADPE</b>	automatic data processing equipment	<b>AGNQ</b>	Apollo/GOSS Navigation Qualifications	<b>AMWA</b>	Area Microwave Assembly (GCF)
<b>ADPRO</b>	Automatic Data Processing Requirements Office (JPL)	<b>AGS</b>	Abort Guidance Subsystem	<b>A-N</b>	alpha-numeric
<b>ADRAC</b>	automatic digital recording and control			<b>ANL</b>	Argonne National Laboratory (AEC)
				<b>ANP</b>	aircraft, nuclear powered

<b>ANSI</b>	<b>American National Standards Institute</b>	<b>ARIS</b>	<b>Advanced Range Instrumentation Ship</b>	<b>ATM</b>	<b>antenna test model</b>
<b>ANT</b>	<b>Antenna Mechanical Subsystem (DSIF)</b>	<b>ARP</b>	<b>Aerospace Recommended Practices</b>	<b>ATM</b>	<b>Apollo Telescope Mount</b>
<b>ANT</b>	<b>Antigua Island (U.K.), USAF ETR Station 91</b>	<b>ARPA</b>	<b>Advanced Research Projects Agency</b>	<b>ATP</b>	<b>Acceptance Test Plan</b>
<b>ant</b>	<b>antenna</b>	<b>ARS</b>	<b>analog recording system</b>	<b>ATR</b>	<b>attenuated total reflectance</b>
<b>AO</b>	<b>auxiliary oscillator</b>	<b>ARTC</b>	<b>Articulation Control Subsystem (VOS)</b>	<b>ATS</b>	<b>Administrative Terminal System (IBM 1440/1460)</b>
<b>AO</b>	<b>Building AO, Cape Kennedy (S/C Checkout Facility No. 2)</b>	<b>ARTU</b>	<b>Automatic Range Tracking Unit</b>	<b>ATS</b>	<b>Angle Tracking System (DSIF)</b>
<b>AODP</b>	<b>Acquisition Orbit Determination Program Assembly (SFOF)</b>	<b>ARU</b>	<b>attitude reference unit</b>	<b>ATS</b>	<b>Applications Technology Satellite</b>
<b>AOP</b>	<b>Assembly and Operations Plan</b>	<b>AS</b>	<b>Aerospace Standards</b>	<b>att</b>	<b>attitude</b>
<b>AOS</b>	<b>acquisition of signal</b>	<b>ASA</b>	<b>Acoustical Society of America</b>	<b>ATTPO</b>	<b>Advanced Transport Technology Program Office (NASA)</b>
<b>AOSD</b>	<b>Aeronautical Operating Systems Division (NASA)</b>	<b>ASC</b>	<b>Ascension Island (U.K.), USAF ETR Station 12</b>	<b>ATTREF</b>	<b>Attitude Reference Program (7094)</b>
<b>AOSO</b>	<b>Advanced Orbiting Solar Observatory</b>	<b>ASC</b>	<b>auxiliary switch closed</b>	<b>ATWS</b>	<b>Automatic Track While Scanning</b>
<b>AOU</b>	<b>azimuth orientation unit</b>	<b>ASCII</b>	<b>American Standard Code for Information Interchange</b>	<b>ATZ</b>	<b>acquisition trigger at zero beat</b>
<b>AP</b>	<b>Acquisition Plan</b>	<b>ASI</b>	<b>advanced scientific instruments</b>	<b>AU</b>	<b>astronomical unit (equal to average distance Earth to Sun)</b>
<b>AP</b>	<b>Apollo Program (NASA)</b>	<b>ASL</b>	<b>Association of Standards Laboratories</b>	<b>AUAIP</b>	<b>Aeronautics Upper Atmosphere Impact Program (NASA)</b>
<b>APA</b>	<b>Allowance for Project Adjustment</b>	<b>ASME</b>	<b>American Society of Mechanical Engineers</b>	<b>AUDRI</b>	<b>Automated Drug Identification</b>
<b>APAC</b>	<b>antenna pointing angle change</b>	<b>ASMS</b>	<b>Advanced Surface Missile System</b>	<b>aux osc</b>	<b>auxiliary oscillator</b>
<b>APC</b>	<b>automatic phase control</b>	<b>ASMS</b>	<b>American Society for Mass Spectrometry</b>	<b>AVA</b>	<b>average alarm</b>
<b>APD</b>	<b>Aeronautical Propulsion Division (NASA)</b>	<b>ASO</b>	<b>Auxiliary Switch Open</b>	<b>AVBS</b>	<b>absolute value bit synchronizer</b>
		<b>ASORF</b>	<b>Apollo Ship's Operational Readiness Force</b>	<b>AVC</b>	<b>automatic volume control</b>
				<b>AVCS</b>	<b>Advanced Videcon Camera System</b>
				<b>AVIS</b>	<b>Automatic Visual Inspection System</b>
				<b>A/VSA</b>	<b>altimeter/velocity sensor antenna (RADVS)</b>

	Hopkins University)	ASP	actual ship position	AWACS	Airborne Warning and Control System
APL	Approved Parts List	ASPP	antenna solar panel positioner	AWS	Area Working Standards
APMT	Advanced Planetary Mission Technology	ASR	automatic send and receive (teletype equipment)	az	azimuth
APP	Advanced Planetary Probe	ASRDI	Aerospace Safety Research and Data Institute	az-el	azimuth-elevation (type of antenna mounting)
APP	Antenna Position Programmer Subsystem (MSFN)	ASSET	Aerothermodynamic Structural Systems Environmental Tests	BAP	band amplitude product
APS	Antenna Pointing Subsystem (DSIF)	assy	assembly	BART	Bay Area Rapid Transit (San Francisco)
APS	Ascent Propulsion System	AST	Advanced System Technology	BAT	Biomedical Application Team (NASA)
APS	Auxiliary Power Supply	AST	Assembly and Structure Test	BB	breadboard
APT	automatic picture transmission	ASTEC	Advanced Solar Turbo-Electric Conversion System	BBB	baseband breadboard
APTIC	Air Pollution Technical Information Center	ASTM	American Society for Testing Materials	BC	binary counter
APTS	Automatic Picture Transmission System	ASTRA	Astronomical and Space Techniques for Research on the Atmosphere	BC	bolometric correction
APU	Auxiliary Power Unit	ASWA	Audio Switch Assembly (GCF)	BC	boresight camera
A/PW	analog to pulse width	AT	acceptance tests	BCC	body-centered cubic *
A/PW	analog to pulse width converter	AT	ambient temperature	BCD	binary-coded decimal (information code)
AQL	acceptable quality level	ATC	Analog Technology Company	BCE	bench checkout equipment
ARC	Ames Research Center (Moffett Field, California)	ATC	Assistant Test Chief	BCF	beam correction factor
ARD	Aeronautical Research Division (NASA)	ATCL	acceleration-type control law	BCR	battery charge regulator
ARE	antenna range equipment	ATD	Aerospace Technology Division (Library of Congress)	BDA	Bermuda (U.K.), NASA MSFN Station
ARG	antenna range equipment (DSIF)	ATE	Area Test Equipment (DSIF)	BDA	Block Decoder Assembly (DSIF, SFOF)
ARIA	Apollo Range Instrumentation Aircraft (DOD ETR)	ATEGG	advanced turbine engine gas generator	BDC	binary decimal counter
				BDL	bad data lister

<b>BDP</b>	Business Data Processing (JPL)	<b>BSMF</b>	bit sync matched filter	<b>CCC</b>	Computer Control Corporation
<b>BDXR</b>	block demultiplexer (GCF)	<b>BSR</b>	Bulk Shielding Reactor (Oak Ridge, Tenn.)	<b>CCD</b>	Central Command Decoder (Spacecraft Assembly)
<b>BECO</b>	booster engine cutoff	<b>BT</b>	burn time	<b>CCE</b>	Change Control Engineer
<b>BEL</b>	bus-Earth tracking station link	<b>BTAM</b>	basic telecommunications access method	<b>CCF</b>	Central Computing Facility (SFOF)
<b>BEOP</b>	best estimate of orbital parameters	<b>BTF</b>	bench-test fixture	<b>CCGA</b>	Communications Control Group Assembly (GCF)
<b>BER</b>	bit error rate	<b>BTL</b>	Bell Telephone Laboratories	<b>CCIG</b>	cold cathode ion gauge
<b>BET</b>	best-estimate trajectory	<b>BTL</b>	below the line (budget)	<b>CCIR</b>	Consultative Committee for International Radio
<b>BF</b>	back focal	<b>BU</b>	backup	<b>CCMD</b>	coded command
<b>B-FACT</b>	Booster Flight-Acceptance Composite Test (AFETR)	<b>B/U</b>	backup (alternate for BU, used by JPL convention)	<b>CCN</b>	Central Command Network
<b>BFEC</b>	Bendix Field Engineering Corporation	<b>BUD</b>	beneficial use date	<b>CCN</b>	command confirmation
<b>BFO</b>	beat-frequency oscillator	<b>BW</b>	bandwidth	<b>CCO</b>	current-controlled oscillator
<b>BFY</b>	budget fiscal year	<b>BWPA</b>	backward-wave power amplifier	<b>CCR</b>	closed-cycle refrigerator
<b>BH</b>	blockhouse	<b>BWR</b>	bandwidth ratio	<b>CCS</b>	Command Control System
<b>BIH</b>	built-in hold (during countdown)	<b>byte</b>	a group of bits usually operated on as a unit (representation of a character)	<b>CCS</b>	Computer Command Subsystem
<b>BIH</b>	International Bureau of Time, Paris (Bureau International de l'Heure)	<b>°C</b>	degrees Celsius (Centigrade)	<b>CC&amp;S</b>	central computer and sequencer
<b>BIOS</b>	biological investigation of space	<b>CA</b>	constant amplitude	<b>CCTL</b>	code clock transfer loop
<b>BIS</b>	British Interplanetary Society	<b>cab</b>	cabling	<b>CCTV</b>	closed-circuit television
<b>bit</b>	binary digit	<b>CAD</b>	computer adaptor display	<b>CCU</b>	convolutional coding unit
<b>BLC</b>	boundary-layer control	<b>CADDC</b>	Central Analog Data Distribution and Computer System	<b>CCW</b>	counterclockwise
<b>BLDT</b>	Balloon Launched Decelerator Test	<b>CADFISS</b>	Computation and Data Flow Integrated Subsystem	<b>CD</b>	circular dispersion
<b>BLDTV</b>	Balloon Launch Drop Test Vehicle	<b>CAE</b>	Computer-Assisted Entry	<b>CD</b>	command decoder
<b>BLH</b>	Baldwin-Lima Hamilton			<b>CDA</b>	Circuit Distribution Assembly (GCF)
<b>BM</b>	bending moment				
<b>B/M</b>	bill of material				

BMXR	block multiplexer (GCF)	CAG	Canopus Acquisition Gate	CDA	Convolutional Decoder Assembly (DSIF)
BNL	Brookhaven National Laboratory (AEC)	CAI	Computer-Assisted Instruction	CDC	Central Document Control (JPL)
BO	beneficial occupancy	CAL	Point Arguello, California, DOD MSFN Station	CDC	Command and Data Handling Console
B-O	buy-off	calbr	calibration	CDC	Command Data Console
BOB	Bureau of the Budget	Caltech	California Institute of Technology	CDC	Control Data Corporation
BOD	beneficial occupancy date	CAM	computer address matrix	CDDT	Countdown Demonstration Test
BOF	bias oscillator frequency	CANEL	Connecticut Advanced Nuclear Engineering Laboratory (AEC)	CDE	Cognizant Development Engineer
BOL	beginning of life	CAO	Crimean Astrophysical Observatory	CDHC	Command and Data Handling Console
BONUS	boiling nuclear superheat reactor	CAPA	Corrosion and Protection Association	CDP	central data processor
BOSS	Bioastronautical Orbiting Satellite	Capcom	Capsule Communicator	CDP	command data processor
BP	bandpass	CARVON	Carnarvon, Australia, NASA STADAN Station	CDR	Critical Design Review
BP	Bioscience Program (NASA)	CAT	clear air turbulence	CDS	circuit data sheet
BPA	Bioshield Power Assembly	CAT	Complementary Analysis Team	CDS	Computer Data System (Univac 1218 or 1219)
BPCA	Bioshield Pyrotechnic Control Assembly (MVM S/C)	CATS	computer-accessed telemetry system	CDSA	Circuit Distribution Assembly (GCF)
BPF	bandpass filter	CAV	composite analog video	CDT	Central Daylight Time
BPI	bits per inch	CB	circuit breaker	CE	Cognizant Engineer
BPS	bits per second	C-band	frequency band between 3.90 and 6.20 GHz	CE	common emitter
BPT	breakpoint	CC	Comm Chief	CE	control electronics
BR	booster-regulator	C&C	command and control	CEA	circular error average
BRD	Booster Requirements Document	CCB	Change Control Board	CEA	Commissariat a l'energie Atomique (France)
BRD	Broadband Subsystem (DSS 41)	CCC	Cape Communications Control	CEC	Consolidated Electrodynamics Corporation
BRS	binary ring sequence	CCC	Central Computing Complex	CEDAU	cruise/entry date acquisition unit
BS	bit sync	CCC	Communication Center Console	CEER	Cost Estimate Error Report
BSG	bit-sync generator				
BSI	British Standards Institution				
BSM	basic subsystem module				

CEIS	Cost Estimate Input Sheet (JPL)	CMDSW	Command Software Subsystem (SFOF)	COSMIC	Computer Software Management and Information Center (Computer Center, University of Georgia, Athens, Ga.)
CEN	Central Datum	CMF	Cartesian mapping function		
CEP	circle end point	CMF	Complex Maintenance Facility (DSIF)	COSPAR	Committee on Space Research, International Council of Scientific Unions
CEP	circular error, probable	CMI	computer-managed instruction		
CEP	Continuous Estimation Program	CMMA	Custom-Metallized Multi-Gate Array		
CEQ	Council on Environmental Quality	CMO	Chief of Mission Operations	COTAR	Correlated Orientation Tracking and Range System
CERL	Cambridge Electromagnetic Radiation Laboratory	CMO	Contract Management Office (JPL)		
CERN	European Organization for Nuclear Research	CMOS	complementary metal-oxide semiconductor	COSWA	Conferences on Science and World Affairs
CESO	Council of Engineers and Scientists Organizations	CMP	Command Module Pilot (Apollo)	CP	calibration procedure (DSIF)
CETS	European Conference on Satellite Communication	CMR	common-mode rejection	CP	candlepower
CF	carrier frequency	CMTM	Capsule Mechanical Training Model	CP	central point
CF	conversion factor	CMU	controls mock up	CP	chemically pure
CFE	contractor-furnished equipment	C:N	carrier-to-noise ratio	CP	circular polarization (DSIF)
CFF	critical flicker frequency	CNI	Committee for Nuclear Information	CP	communications processor (SFOF, 490)
CFR	Code of Federal Regulations	cntrwt	counterweight		
CFS	central frequency synthesizer	CNV	Cape Kennedy, USAF ETR Station 1	CP	Communications Programs (NASA)
CFT	complex Fourier transform			CP	Control Point (JPL security)
CFU	central firing unit	CO	checkout	C-P	Cartesian to polar
CG	Center of gravity	CO	crystal oscillator	C&P	Capabilities and Procedures
Ch	channel (to be used only before designator)	CO	Spacecraft Coordinator	CPA	closest point of approach
		CO	change order	CPA	color phase alternation
CHC	corrected headcount	CODASYL	Committee for Data Systems Languages	CPA	critical path analysis
CI	Center of Impact			CPAF	Cost Plus Award Fee

<b>CIA</b>	Communications Interface Assembly (DSIF)	<b>CODATA</b>	Committee on Data for Science and Technology	<b>CPCC</b>	Communications Processor Conversion Center
<b>CIC</b>	computer interface control (part of DTV computer)	<b>CODSIA</b>	Council of Defense/Space Industrial Association	<b>CPD</b>	contact potential difference
<b>CIF</b>	Central Instrumentation Facility (KSC)	<b>COE</b>	Cognizant Operations Engineer	<b>CPE</b>	circular probable error
<b>CINDA</b>	Chrysler Improved Numerical Differencing Analyzer	<b>COEPL</b>	Cognizant Operations Engineer's Parts List	<b>CPFF</b>	Cost Plus Fixed Fee
<b>CINDA</b>	computer index of neutron data	<b>CO-I</b>	Co-Investigator	<b>CPI</b>	characters per inch
<b>CIRES</b>	Cooperative Institute for Research in Environmental Sciences	<b>COINOPS</b>	counterinsurgency operations	<b>CPI</b>	clock pulse interval
<b>CJMA</b>	Communications Junction Module Assembly (GCF)	<b>COL</b>	Capsule-Orbiting Bus Link	<b>CPRA</b>	Communications Processor Assembly (GCF)
<b>CKAFS</b>	Cape Kennedy Air Force Station	<b>COLIDAR</b>	coherent light radar	<b>CPS</b>	Central Processing System (SFOF)
<b>CLETS</b>	California Law Enforcement Telecommunications System	<b>coll</b>	collimation	<b>CPS</b>	Communications Processing System
<b>CLT</b>	Communications Line Terminal	<b>COM</b>	computer output microfilm	<b>CPU</b>	central processing unit
<b>CM</b>	Celestial Mechanics	<b>COMB</b>	command confirmation buffer	<b>CPV</b>	Canopus probe near limb of Venus angle
<b>CM</b>	Command Module (Apollo)	<b>Corngen</b>	Command Generation Program (Mariner)	<b>CR</b>	Central Recorder Subsystem
<b>CM</b>	composite merge	<b>comm</b>	communications	<b>CR</b>	Change Request
<b>CMA</b>	Command Modulator Assembly (DSIF)	<b>COMP</b>	Computation Subsystem (SFOF)	<b>CRA</b>	Community Redevelopment Agency
<b>CMD</b>	Command Data System (SFOF)	<b>comp</b>	computer	<b>CRAM</b>	Computerized Reliability Analysis Method
<b>CMD</b>	Command System (DSN, DSIF)	<b>Compac</b>	Commonwealth Transpacific (submarine cable in Pacific)	<b>CRDF</b>	cathode-ray direction finder
<b>cmd</b>	command	<b>compl</b>	complete	<b>CRE</b>	cross-range error
<b>CMD CC</b>	Command Computer Console	<b>Comsat</b>	Communications Satellite	<b>CRFS</b>	Combined Reference Frequency System
<b>cmdmsg</b>	command message	<b>COMSOC</b>	Communications Spacecraft Operations Center (GSFC)	<b>CRO</b>	Carnarvon, Australia, NASA MSFN Station
		<b>Conscan</b>	Conical Scan System (Pioneer F & G)	<b>CRO</b>	cathode-ray oscilloscope
		<b>COSATI</b>	Committee on Scientific and Technical Information	<b>CRP</b>	Change Review Panel
				<b>CRS</b>	Central Recorder Subsystem (S/C)

CRSS	critical resolved shear stress	D-A	digital-to-analog	DC-V	direct command-(Mariner Venus 67)
CRT	cathode-ray tube	DAA	Division Administrative Assistant	DDA	Data Decoder Assembly (DSIF, SFOF)
CRT	Composite Readiness Test	DAC	data acquisition center	DDA	Development Display Assembly (DSIF, MVM 73 MDE)
CRT	cosmic ray telescope	DAC	digital-to-analog converter	DDC	Defense Documentation Center
Cryo	cryogenic	DACO	Data Consistency Orbit	DDC	Direct Data Channel (SFOF IBM 7044 to 7094 Interchange)
CS	communications switcher	DACON	Data Controller (SFOF)	DDF	Director's Discretionary Fund
CSA	character scan or alternate	DAE	data acquisition equipment	DDFT	design, development, fabrication, testing
CSAD	capsule system advanced development	DAE	data automation equipment	DDJ	digital differencing junction
CSAR	communication satellite advanced research	DAF	Data Analysis Facility	DDR	Development Discrepancy Report
CSD	Configuration Standardization Document (DSIF)	DAL	Data Analysis Laboratory	DDT	digital demodulation technique
CSE	Cognizant Sustaining Engineer	DAP	digital autopilot	DDU	digital display unit
CSF	character scan or fail	DAPFS	direct-ascent powered-flight simulation	DE	data encoder
CSIR	Council for Scientific and Industrial Research (South Africa)	DAPU	Data Acquisition and Processing Unit (VOS)	DE	development ephemeris
CSM	Command and Service Module (Apollo)	DART	Decomposed Ammonia Radioisotope Thruster	dec	declination
CSP	Communications Satellite Program (NASA)	DART	Dynamic Simulation of Auto and Passenger Rail Transports	decom	decommutator
CSR	Clock-Sync Receiver Assembly (DSIF)	DAS	Data Accountability System (capability within JPLOS)	decomm	decommutation
CSSL	Continuous System Simulation Language	DAS	data acquisition system	demod	demodulator
CST	Central Standard Time	DAS	Data Automation Subsystem (Mariner S/C)	demux	demultiplexer
CST	Combined Systems Test	DAVC	delayed automatic volume control	DEP	deflection error probable
		DB	decibel	DEPD	Division Engineering Planning Document
		DBA	decibel, adjusted	DEPI	Differential Equations Pseudo-Code Interpreter (JPL computer routine)

CT	center tap	DBI	decibels antenna gain referred to isotope antenna	DEV	Design Evaluation Vehicle
CTA 21	Compatibility Test Area, JPL, Pasadena, California	DBM	decibels referred to 1 milliwatt	DEW line	Distant Early Warning line
CTL	carrier tracking loop	DBW	decibels referred to 1 watt	DF	direction finder
CTM	Cognizant Technical Manager	DC	direct command	DFIS	dual filament ion source
CTM	Contract Technical Manager	DC	discrete command	DFL	display formatting language
CTP	coded telemetry processor	DCA	data decoder assembly	DFM	dual-frequency method
CTS	Central Timing System	DCAA	Defense Contract Audit Agency	DFR	dual-frequency receiver
CTS	Range Instrumentation Ship (Twin Falls) S-band antenna system	DCAS	Data Collection and Analysis System (GSFC)	DFVLR	German Institute for Aerospace
CTV	control test vehicle	DCASR	Defense Contract Administration Services Region	DHPE	Data Hardware Project Engineer
CUE	Cognizant User Engineer (DSN Tracking System Operations)	DCC	Data Communication Channel (SFOF IBM 7288)	DIA	digital isolation amplifier
CVR	command verification	DCC	Data Condition Code	dia	diameter
CVR/D	command verification/drop (data exit mode)	DCC	Document Control Chief	Diags	Diagnostic Program
CVT	command verify/transmit	DCES	DSS Communications Equipment Subsystem (GCF)	DIA-LOGICS	Document Indexing and Listing of Graphic Information Codes System (JPL)
CVT	Configuration Verification Test	DCH	Data Chief	Diamon	Diagnostic Monitor (SFOF CPS)
CW	carrier wave	DCOS	Direct Couple Operating System	DIC	data insertion converter
CW	clockwise	DCR	Daily Communication Report	DID	data identification (HSD/WBD)
CW	continuous wave	DCS	data conditioning system	DIRAM	Digital Range Machine
CY	calendar year	DCS	data conversion system	DIS	Data Input System (of Computer Data System)
CZ	communications zone	DCS	digital command system	DIS	Digital Instrumentation Subsystem (DSIF)
CZR	strip film camera	DCT	data communications terminal	DISCO	Defense Industrial Security Clearance Office
D <sub>1</sub>	one-way doppler detection	DCT	DSS Communications Terminal Subsystem (GCF)	DIT	Documentation Implementation Team (DSN)
D <sub>2</sub>	two-way doppler detection	DCU	distribution control unit	dk	docked
D <sub>3</sub>	three-way doppler detection				
DA	double amplitude				

DL	data link	DPST	double-pole single-throw (switch)	DSS 51	Johannesburg Deep Space Station, Johannesburg, Republic of South Africa
DL	downlink	DPT	Descent Performance Test		
DL	Direct Labor	DPT	Design Proof Test		
DLA	declination of outgoing asymptote	DPTRAJ	Double-Precision Trajectory Program	DSS 61	Robledo Deep Space Station, Madrid Complex, Robledo de Chavela, Spain
DLL	design load limit	DQM	data quality monitor		
DLM	depot-level maintenance	DR	data requirements	DSS 62	Cebreros Deep Space Station, Madrid Complex, Cebreros, Spain
DLRV	Dual-mode Lunar Roving Vehicle	DR	Discrepancy Report		
DLT	direct labor time	DRD	data requirements description	DSS 63	Rio Cofio Deep Space Station, Madrid Complex, Rio Cofio, Spain
D/M	demodulator/modulator	DRD	differenced-range doppler		
DMC	discrete memoryless channel	DRD	Division of Reactor Development (AEC)	DSS 71	Spacecraft Compatibility/Monitor Station, Cape Kennedy, Florida
DMC	DSIF Monitor and Control Subsystem (DSIF Mark III)	DRE	down-range error		
DME	distance measuring equipment	DRK	data request keyboard	DSTA	Distribution Assembly (GCF)
DMF	DSIF Maintenance Facility	DRL	Data Requirements List (JPL)	DT	digital tracker
DMM	dedicated man/months (JPL)	DRN	Document Release Notice (JPL)	DTC	DSIF Telemetry and Command Subsystem (Mark III)
DMO	Data Management Office (JPL)	DRS	Digital Recording System		
DMP	Data Management Plan (JPL)	DRS	Discrepancy Reporting System	DTC	display timing control
DMPI	desired mean point of impact	DRVID	Differenced Range Versus Integrated Doppler (charged particle measurement)	DTF	DSIF Testing Facility
DMS	data multiplex system			DTG	date/time group
DN	data number	DSB	double sideband	DTL	diode-transistor logic
DNA	deoxyribonucleic acid	DSBSC	double-sideband suppressed carrier	DTM	Design Test Model
DOA	dioctyl adipate	DSC	differential scanning calorimeter	DTM	Developmental Test Model
DOB	Data Operations Branch	DSC	differential scanning calorimetry	DTM	Dynamic Test Model (S/C)
DOD	Department of Defense	DSC 10	Goldstone Deep Space Communications Center	DTO	detailed test objective
DOD	depth of discharge			DTR	digital tape recorder
DODGE	Dept. of Defense Gravity Experiment	DSCC	Deep Space Communications Complex	DTS	Digital Tracking System
DOP	Detailed Operating Procedure				

DORAN	doppler ranging system	DSD	Data Status Display (SFOF DPCS)	DTS	Digital Tracking Subsystem
DOS	Department of Supply (Australia)	DSD	DSIF Supply Depot	DTS	DSIF Tracking and Monitor & Control Subsystem
DOS	disk operating system	DSDP	Data System Development Plan	DTSP	DTS I/O Processor Assembly (DSIF)
DOT	Department of Transportation	DSE	data storage equipment	DTTL	data-transition tracking loop
DOT	dynamic operation test	DSE	development support equipment	DTU	data transmission unit
DOW	Department of Works (Australia)	DSI	Data System Integration (Mariner)	DTV	Digital Television (SFOF)
DOY	day of year	DSIF	Deep Space Instrumentation Facility	DU	Documentation Unit
DP	data processing	dsky	display and keyboard	DUN	data users' note
DP	dew point	DSM	data storage memory	DV	digital video
DP	double-pole (switch)	DSN	Deep Space Network	DVB	divinylbenzene
DPA	Data Processing Area	DSS	Data Storage System (S/C)	DVDS	digital video display system
DPCA	Data Processing Control Area (SFOF)	DSS	Deep Space Station	DVM	digital velocity meter
DPCC	Data Processing Control Center (SFOF)	DSS 11	Pioneer Deep Space Station, Goldstone Complex, Barstow, California	DVM	digital voltmeter
DPCC	Data Processing Control Console (SFOF)	DSS 12	Echo Deep Space Station, Goldstone Complex, Barstow, California	DVP	Data Validation Program
DPDT	double-pole double-throw (switch)	DSS 13	Venus Deep Space Station, Goldstone Complex, Barstow, California	DWS	Depot Working Standards
DPE	dynamic phase error	DSS 14	Mars Deep Space Station, Goldstone Complex, Barstow, California	DXD	distortion analyzer
DPLF	data phone line formatter	DSS 41	Woomera Deep Space Station, Woomera, Australia	DYSTATAL	dynamic storage allocation
DPLF	digital phone line formatter	DSS 42	Weemala Deep Space Station, Tidbinbilla Complex, Canberra, Australia	E	east (longitude)
DPODP	Double-Precision Orbit Determination Program	DSS 43	Ballima Deep Space Station, Tidbinbilla Complex, Canberra, Australia	E	encounter + (time)
DPPE	Data Processing Project Engineer			E	time of encounter
DPS	Data Processing System (SFOF)			(E)	experimental
DPS	Descent Propulsion System			EA	electronic assembly
DPS	digital phase shifter			EAM	electronic accounting machine
DPSS	Data Processing Switching System (SFOF)			EAM	electronic automatic machinery
				EASL	Experimental Assembly Sterilization Laboratory
				EAT	Engineering Analysis Team

<b>EB</b>	engine burn	<b>EIN</b>	external interlace	<b>EPIC</b>	Extraterrestrial Photographic Information Center (Goddard)
<b>EBCD</b>	extended binary coded decimal (information code)	<b>el</b>	elevation	<b>EPO</b>	Earth-parking orbit
<b>EBRG</b>	Earth-based radio guidance	<b>ELACS</b>	Extended Life Attitude Control Subsystem	<b>EPPL</b>	Electronic Preferred Parts List (JPL)
<b>ECA</b>	Engineering Change Authorization	<b>ELAS</b>	equilibrium problems of linear structures	<b>EPPO</b>	Earth Physics & Physical Oceanography Program (NASA)
<b>ECAP</b>	Electrical Circuit Analysis Program	<b>ELDMK</b>	Earth landmark	<b>EPR</b>	electron paramagnetic resonance
<b>ECC</b>	Emergency Communication	<b>ELDO</b>	European Launcher Development Organization	<b>EPR</b>	ethylene propylene rubber
<b>ECC</b>	Engineering Change Control	<b>elec</b>	electronics	<b>EPS</b>	Earth-probe-sun (angle)
<b>ECC</b>	Error Correction Code	<b>ELF</b>	early lunar flare	<b>EPS</b>	emergency power supply
<b>ECI</b>	Earth-centered equatorial inertial	<b>ELF</b>	extremely low frequency	<b>EPV</b>	Earth probe near limb of Venus angle
<b>ECI</b>	Engineering Change Instruction	<b>ELSSE</b>	electronic sky-screening equipment	<b>EPUT</b>	events per unit time
<b>ECM</b>	electronic countermeasures	<b>ELSSE</b>	electronic sky screen – range safety	<b>eq</b>	equation
<b>ECO</b>	Engineering Change Order	<b>EM</b>	electromagnetic	<b>EQL</b>	Environmental Quality Laboratory (Caltech)
<b>ECP</b>	Engineering Change Proposal	<b>EM</b>	engineering model	<b>EREPP</b>	Earth Resources Experiment Packaging Program (NASA)
<b>ECR</b>	Engineering Change Request	<b>EMC</b>	electromagnetic compatibility	<b>ERIC</b>	Educational Resources Information Center
<b>ECR</b>	Engineering Change Requirement	<b>EMC</b>	equivalent mission cycle	<b>ERP</b>	effective radiated power
<b>ECS</b>	engine control system	<b>EMF</b>	Equipment Maintenance Facility (DSIF)	<b>ERS</b>	Earth Resources Satellite
<b>ECS</b>	environmental control system	<b>EMI</b>	electromagnetic interference	<b>ERSFP</b>	Earth Resources Survey Flights Program (NASA)
<b>ECU</b>	electrical conversion unit	<b>EMSL</b>	Electronic Material Sciences Laboratory (Div. of AF Cambridge Research Center)	<b>ERSP</b>	Earth Resources Survey Program (NASA)
<b>ED</b>	engineering document	<b>EMU</b>	engineering mock up		
<b>ED</b>	explosive device	<b>ENEA</b>	European Nuclear Energy Agency		
<b>EDA</b>	Economic Development Administration				
<b>EDED</b>	error detection encoder-decoder (GCF)				
<b>EDIT</b>	Editor Assembly (SFOF)				

<b>EDMS</b>	Engineering Data Management System (JPL)	<b>ENIAC</b>	Electronic Numerical Integrator and Computer (Univ. of Penn.)	<b>ERTS</b>	Earth Resource Technology Satellite (Redesignated Earth Observation Satellite, EOS)
<b>EDP</b>	electronic data processing	<b>EO</b>	extended operations	<b>ESA</b>	explosive-safe area
<b>EDPLOT</b>	Engineering Data Plotting (computer program)	<b>EOB</b>	end of block	<b>ESCA</b>	electron spectroscopy for chemical analysis
<b>EDR</b>	Experiment Data Record	<b>EOCY</b>	end of calendar year	<b>ESED</b>	Environmental System & Effects Division (NASA)
<b>EDS</b>	entry data subsystem	<b>EOF</b>	end of file	<b>ESF</b>	explosive-safe facility
<b>EDT</b>	Eastern Daylight Time	<b>EOFY</b>	end of fiscal year	<b>ESG</b>	electrostatically suspended gyro
<b>EED</b>	electroexplosive device	<b>EOL</b>	end of life	<b>ESLO</b>	European Space Launcher Organization
<b>EF</b>	emergency fix	<b>EOM</b>	end of message	<b>ESR</b>	electron spin resonance
<b>EFL</b>	effective focal length	<b>EOM</b>	end of mission	<b>ESRO</b>	European Space Research Organization
<b>EFL</b>	equivalent focal length	<b>EOM</b>	energize output M (SDS symbol language)	<b>ESS</b>	Emplaced Science Station
<b>EFR</b>	Equipment Failure Report	<b>EOP</b>	Earth Observations Programs (NASA)	<b>EST</b>	Eastern Standard Time
<b>EFS</b>	Earth-fixed system	<b>EOPS</b>	ETR Operations	<b>ESTEC</b>	European Space Technical Center
<b>EGADS</b>	Electronic Ground Automatic Destruct Sequencer	<b>EOS</b>	Earth Observation Satellite	<b>ESV</b>	Earth satellite vehicle
<b>EGO</b>	Eccentric-Orbit Geophysical Observatory	<b>EOS</b>	Electro-Optical Systems, Inc.	<b>ET</b>	Ephemeris Time
<b>EGSE</b>	Electronic Ground Support Equipment	<b>EOSS</b>	Earth Orbiting Space Stations	<b>ETA</b>	estimated time of arrival
<b>EHD</b>	electrohydrodynamics	<b>EOT</b>	Earth-Observed Time	<b>ETC</b>	Engineering Test Capsule
<b>EHF</b>	extremely high frequency (30 to 300 GHz)	<b>EOT</b>	end of tape	<b>ETC</b>	MSFN Test and Training Facility designator
<b>EHV</b>	extra-high voltage	<b>EOT</b>	end of test	<b>ETE</b>	Engineering Support Test Equipment (DSIF)
<b>EI</b>	Engineering Index	<b>EOT</b>	end of track	<b>ETL</b>	Environmental Test Laboratory (JPL)
<b>EI</b>	Engineering Instruction	<b>EOY</b>	end-of-year	<b>ETM</b>	Engineering Test Model
<b>EI</b>	exponential integral	<b>EP</b>	electrical prototype		
<b>EIA</b>	Electronic Industries Association	<b>EP</b>	Engineering Procedure		
		<b>EP-3</b>	energizing pressure 3 (battery pressure)		
		<b>EPA</b>	Environmental Protection Agency		
		<b>EPD</b>	Engineering Planning Document		

<b>ETO</b>	ephemeris-tuned oscillator	<b>FLYBY</b>	Flyby Fine Print (computer program)	<b>FTS</b>	Frequency and Timing Subsystem (DSIF)
<b>ETO</b>	ethylene oxide	<b>FM</b>	flight model	<b>FTV</b>	flight test vehicle
<b>ETR</b>	Environmental Test Report	<b>FM</b>	frequency modulated	<b>FWHM</b>	full width at half maximum
<b>ETR</b>	(see AFETR)	<b>FM</b>	frequency modulation	<b>FY</b>	fiscal year
<b>ETS</b>	Edwards Test Station (NASA)	<b>FMECA</b>	Failure Mode, Effect, and Criticality Analysis	<b>GALCIT</b>	Guggenheim Aeronautical Laboratory (California Institute of Technology)
<b>ETV</b>	engineering TV mode	<b>FMFD</b>	frequency modulation feedback discriminator	<b>GAO</b>	General Accounting Office
<b>EU</b>	engineering unit	<b>FMM</b>	Financial Management Manual (NASA)	<b>GARP</b>	Global Atmosphere Research Program
<b>EVA</b>	extravehicular activity	<b>FMS</b>	frequency-multiplexed subcarrier	<b>GARP</b>	Global Atmospheric Research Program
<b>EVT</b>	Engineering Verification Test	<b>F/O</b>	fuel to oxidizer ratio	<b>GAT</b>	Greenwich Apparent Time
<b>EVT</b>	extra-vehicular transfer	<b>FOF</b>	Flight Operations Facility	<b>GBI</b>	Grand Bahama Island (U.K.), USAF ETR Station 3
<b>EWO</b>	Engineering Work Order	<b>FOG</b>	Flight Operations Group	<b>GC</b>	gyro control
<b>EWR</b>	early warning radar	<b>FOM</b>	Field Operations Memorandum	<b>G&amp;C</b>	guidance and control
<b>EWU</b>	Engineering Writing Unit	<b>FOP</b>	Financial Operating Plan	<b>GCA</b>	ground-controlled approach
<b>EXAM-ETNET</b>	Experimental Interamerican Meteorological Rocket Network	<b>FOV</b>	field of view	<b>GCA</b>	Gyro Control Assembly
<b>exc</b>	exciter	<b>FPAA</b>	Flight Path Analysis Area (SFOF)	<b>GCAT</b>	Guidance and Control Analysis Team (SFO)
<b>EXEC-8</b>	Executive Software Assembly (SFOF, 1108)	<b>FPAC</b>	flight path analysis and command	<b>GCC</b>	guidance and control computer
<b>ext</b>	external	<b>FP&amp;D</b>	facilities planning and design	<b>GCD</b>	greatest common divisor
<b>°F</b>	degrees Fahrenheit	<b>FPO</b>	Future Projects Office (NASA)	<b>GCF</b>	greatest common factor
<b>F1A</b>	calibration curve weighted to correspond to the sensitivity of the human ear at various frequencies	<b>FPR</b>	Failure/Problem Report	<b>GCF</b>	ground command facility
<b>FA</b>	flight acceptance	<b>FPR</b>	flight performance reserve		
<b>fab</b>	fabricate	<b>FPR</b>	full propellant requirement		
<b>fac</b>	facilities	<b>FPS</b>	fixed-point station (type of radar)		
		<b>FPS</b>	flight power subsystem		
		<b>FR</b>	Failure Report		

<b>FACT</b>	<b>Flight Acceptance Compatibility Test</b>	<b>FR</b>	<b>functional requirements</b>	<b>GCF</b>	<b>Ground Communications Facility</b>
<b>FACT</b>	<b>Flight Acceptance Composite Test</b>	<b>FR-1200,-1400,-2000</b>		<b>GCF-CS</b>	<b>Ground Communications Facility-Communications Switcher</b>
<b>farada</b>	<b>failure rate data</b>		<b>magnetic tape recorder models (DSIF)</b>	<b>GCISD</b>	<b>Guidance, Control and Information Systems Division (NASA)</b>
<b>FAT</b>	<b>Flight Acceptance Test</b>			<b>GCMS</b>	<b>gas chromatograph/mass spectrometer</b>
<b>FAV</b>	<b>full analog video</b>	<b>FRC</b>	<b>Federal Records Center</b>	<b>GCS</b>	<b>Ground Command System</b>
<b>FC</b>	<b>flight capsule</b>	<b>FRC</b>	<b>Flight Research Center (NASA)</b>	<b>GCSC</b>	<b>guidance control and sequencing computer</b>
<b>FCA</b>	<b>frequency control analysis</b>	<b>FRD</b>	<b>flight readiness demonstration</b>	<b>GCT</b>	<b>guidance command test</b>
<b>FCC</b>	<b>Federal Communications Commission</b>	<b>FRF</b>	<b>flight readiness firing</b>	<b>GCT</b>	<b>Greenwich Civil Time</b>
<b>FCE</b>	<b>flight control electronics</b>	<b>FRS</b>	<b>Flight Radio Subsystem</b>	<b>GD/C</b>	<b>General Dynamics/Convair</b>
<b>FCEU</b>	<b>flight control electronics unit</b>	<b>FRT</b>	<b>Flight Rating Test</b>	<b>GDHS</b>	<b>Ground Data Handling System</b>
<b>FCP</b>	<b>flight control programmer</b>	<b>FRT</b>	<b>flow-recording transmitter</b>	<b>GDS</b>	<b>geodetic data site</b>
<b>FCS</b>	<b>Flight Command Subsystem (S/C)</b>	<b>FS</b>	<b>full scale</b>	<b>GDS</b>	<b>Goldstone, California, NASA MSFN Station</b>
<b>FCS</b>	<b>Flight Control Subsystem</b>	<b>FSC</b>	<b>fibrous sausage casing</b>	<b>GDSCC</b>	<b>Goldstone Deep Space Communications Complex</b>
<b>FCSG</b>	<b>flight control sensor group</b>	<b>FSE</b>	<b>facility support equipment</b>	<b>GDSX</b>	<b>Goldstone, California, NASA MSFN Station (at DSS 11)</b>
<b>FCV</b>	<b>Flight Checkout Vehicle</b>	<b>FSE</b>	<b>Facility Systems Engineer</b>	<b>GE</b>	<b>General Electric Company</b>
<b>FDM</b>	<b>frequency-division multiplex</b>	<b>FSE</b>	<b>frequency-shift keyed</b>	<b>GEOS</b>	<b>geodetic satellite</b>
<b>FDS</b>	<b>Flight Data System (VOS)</b>	<b>FSK</b>	<b>frequency-shift keying</b>	<b>GERT</b>	<b>Graphic Evaluation and Review Technique</b>
<b>FDX</b>	<b>full duplex (two-way)</b>	<b>FSM</b>	<b>frequency-shift modulation</b>	<b>GET</b>	<b>ground elapsed time (since liftoff)</b>
<b>FEDGE</b>	<b>finite element data generation</b>	<b>FSR</b>	<b>feedback shift register</b>	<b>GFC</b>	<b>Glass Filter Covers</b>
<b>FEPS</b>	<b>Far-Encounter Planet Sensor</b>	<b>FTC</b>	<b>fast-time constant (circuit)</b>	<b>GFE</b>	<b>government-furnished equipment</b>
<b>FET</b>	<b>field effect transistor</b>	<b>FTC</b>	<b>Federal Trade Commission</b>		
<b>FET</b>	<b>functional element test</b>	<b>FTD</b>	<b>Flight Test Directive</b>		
<b>F-F</b>	<b>Flip-Flop</b>	<b>FTK</b>	<b>field test kit</b>		
<b>FFPI</b>	<b>flip-flop position indicator</b>	<b>FTMYRS</b>	<b>Fort Meyers, Florida, NASA STADAN Station</b>		
<b>FFT</b>	<b>fast fourier transform</b>				
<b>FIGS</b>	<b>figures (TTY upper case)</b>	<b>FTS</b>	<b>Federal Telecommunications System</b>		
<b>FIM</b>	<b>Field Instruction Memorandum</b>	<b>FTS</b>	<b>Flight Telemetry Subsystem (S/C)</b>		
<b>FL</b>	<b>focal length</b>				

<b>GFM</b>	government-furnished material	<b>GWM</b>	Guam (U.S.), Marianas Islands, NASA MSFN Station	<b>HRT</b>	high-rate telemetry
<b>GFP</b>	government-furnished property	<b>HA</b>	hour angle	<b>HRTS</b>	High-Rate Telemetry System
<b>GHA</b>	Greenwich hour angle	<b>HAC</b>	Hughes Aircraft Company	<b>HS</b>	high speed
<b>GHE</b>	ground handling equipment	<b>HA-dec</b>	hour angle-declination (type of antenna mounting)	<b>HSCF</b>	Health Sciences Computing Facility (UCLA)
<b>GIDEP</b>	Government-Industry Data Exchange Program	<b>HAPO</b>	Hanford Atomic Products Operations (AEC)	<b>HSD</b>	high-speed data
<b>GI FOR SS</b>	Goddard Institute for Space Studies (NASA)	<b>HARP</b>	High Altitude Research Programs	<b>HSDA</b>	High-Speed Data Assembly (GCF)
<b>GLC</b>	gas-liquid chromatography	<b>HASP</b>	Houston Automatic Spooling System	<b>HSDL</b>	high-speed data line
<b>GLO</b>	Goddard Launch Operations (NASA, Cape Kennedy, Florida)	<b>HAT</b>	horizontal alidade tie	<b>HSK</b>	Honeysuckle Creek, Australia, NASA MSFN Station
<b>glotrac</b>	global tracking	<b>HAW</b>	Koikee Park, Kauai, Hawaii, NASA MSFN Station	<b>HSKX</b>	Weemala, Australia, NASA MSFN Station (at DSS 42)
<b>GLPR</b>	Goldstone predict (orbit identification)	<b>HAZ</b>	heat-affected zones	<b>HSRA</b>	High-Speed Data Regeneration Assembly (GCF)
<b>GM</b>	ground mode	<b>HC</b>	headcount	<b>HSS</b>	High-Speed System (GCF)
<b>GM</b>	Geiger-Muller	<b>HC</b>	high current	<b>HTC</b>	height-to-time converter
<b>GM</b>	gravitational constant	<b>HCF</b>	highest common factor	<b>HTFMI</b>	Heat Transfer and Fluid Mechanics Institute
<b>GM</b>	gravitational mass	<b>HD</b>	high density	<b>HUD</b>	Dept. of Housing and Urban Development
<b>GMT</b>	Greenwich Mean Time (Zulu time)	<b>HDR</b>	high-density recorder (DSIF)	<b>HUMRRO</b>	Human Resources Research Organization
<b>GOE</b>	ground operating equipment	<b>HDW</b>	hardware	<b>HVAC</b>	high voltage alternating current
<b>GOE</b>	Ground Operational Equipment (Pioneer Project)	<b>HDX</b>	half-duplex (both ways, but not simultaneously)	<b>HVC</b>	high-voltage control
<b>GOE</b>	ground operations equipment	<b>HE</b>	heat exchanger	<b>HVPS</b>	high-voltage power supply
<b>GOFAR</b>	Global Ocean Floor Analysis and Research	<b>HEAO</b>	High Energy Astronomical Observatory	<b>HWT</b>	hypersonic wind tunnel
<b>GOSS</b>	Ground Operations Support System	<b>HEF</b>	high-energy fuel	<b>hyd</b>	hydraulic
<b>GP</b>	galactic probe	<b>HEPA</b>	high-efficiency particulate air	<b>Hz</b>	Hertz (cycles per second)
<b>GP</b>	general purpose	<b>HEUS</b>	high energy upper stage		

<b>GPI</b>	ground position indicator	<b>HEW</b>	Dept. of Health, Education, and Welfare	<b>IAA</b>	International Aerospace Abstracts
<b>GPO</b>	general-purpose output (SFOF)			<b>IAA</b>	International Academy of Astronautics
<b>GPO</b>	Government Printing Office	<b>HEX</b>	hexadecimal - base 16 numbering system	<b>IACS</b>	International Arms Control Symposium
<b>GPSP</b>	general-purpose software program	<b>HF</b>	high frequency (3 to 30 MHz)	<b>IAD</b>	International Astrophysical Decade
<b>GRAS</b>	generally recognized as safe	<b>HF/DF</b>	high-frequency direction finding	<b>IAF</b>	International Astronautical Federation
<b>GRE</b>	ground reconstruction electronics	<b>HFE</b>	heat flow experiment	<b>IAGA</b>	International Association of Geomagnetism and Aeronomy
<b>GRS</b>	gamma-ray spectrometer	<b>HGA</b>	high gain antenna	<b>IAIE</b>	Inter-American Institute of Ecology
<b>GRSP</b>	General Range Safety Plan	<b>HGAC</b>	high gain antenna controller	<b>IAMAP</b>	International Association of Meteorology and Atmospheric Physics
<b>GSA</b>	General Services Administration	<b>HI</b>	heat index	<b>IAPG</b>	Interagency Advanced Power Group (NASA, AEC, and ARPA)
<b>GSDS</b>	Goldstone Duplicate Standard (DSIF)	<b>HIG</b>	Hermetically Sealed Integrating Gyroscope	<b>IAPS</b>	Interim Antenna Pointing Subsystem (DSIF)
<b>GSE</b>	ground-support equipment	<b>HILAC</b>	heavy-ion linear accelerator	<b>IATV</b>	Interactive Alphanumeric Television (SIMCEN)
<b>GSFC</b>	Goddard Space Flight Center (Greenbelt, Maryland)	<b>HI-REL</b>	high-reliability program	<b>IAU</b>	International Astronomical Union
<b>GSMA</b>	Goldstone-SFOF Microwave Assembly (GCF)	<b>HON</b>	Honolulu, Hawaii, NASCOM Switching Facility	<b>IBM</b>	International Business Machines Corporation
<b>GST</b>	Greenwich Sidereal Time	<b>HP</b>	Hewlett-Packard		
<b>GTK</b>	Grand Turk Island (U.K.), USAF ETR Station 7	<b>HP</b>	horsepower		
<b>GTS</b>	Ground Telemetry Subsystem (Mariner)	<b>HP/LP</b>	high power/low power		
<b>GTS</b>	ground test station	<b>HPPS</b>	Surveyor trajectory processor (computer program mnemonic)		
<b>GTS</b>	Goldstone Tracking Station	<b>HPT</b>	high-pressure tap		
<b>GTV</b>	ground transport vehicle	<b>HPT</b>	high-pressure test		
<b>GUB</b>	greatest upper bound	<b>HPU</b>	high-pressure unit		
		<b>HRCF</b>	Hardware Review Certification Form		
		<b>HRF</b>	high-resolution facsimile		

<b>IBSYS</b>	<b>International Business Machines System</b>	<b>ILD</b>	<b>in-lock detector</b>	<b>IRFNA</b>	<b>inhibited red fuming nitric acid (missile fuel oxidizer)</b>
<b>IC</b>	<b>inductance-capacitance</b>	<b>ILLIAC</b>	<b>Illinois automatic computer (Univ of Ill)</b>	<b>IRG</b>	<b>integrating rate gyroscope</b>
<b>IC</b>	<b>integrated circuit</b>	<b>ILRV</b>	<b>Integrated Launch and Re-entry Vehicle</b>	<b>IRIA</b>	<b>Infrared Information and Analysis Center (Willow Run Laboratories of University of Mich)</b>
<b>IC</b>	<b>ionization chamber</b>	<b>ILRVS</b>	<b>Integrated Launch and Re-entry Vehicle System</b>	<b>IRIG</b>	<b>Inter-Range Instrumentation Group</b>
<b>ICARVS</b>	<b>Interplanetary Craft for Advanced Research in Vicinity of Sun</b>	<b>ILS</b>	<b>instrument landing system</b>	<b>IRIS</b>	<b>infrared interferometer spectrometer</b>
<b>ICD</b>	<b>Interface Control Document</b>	<b>ILS</b>	<b>International Latitude Service</b>	<b>IRR</b>	<b>infrared radiometer</b>
<b>ICDR</b>	<b>ion cyclotron double resonance</b>	<b>ILSE</b>	<b>Interagency Life Sciences Supporting Research and Technology Exchange</b>	<b>IRS</b>	<b>infrared spectrometer</b>
<b>ICEV</b>	<b>Initial Condition Evaluation (orbit identification)</b>			<b>IRS</b>	<b>intermediate reference structure</b>
<b>ICEV</b>	<b>injection condition evaluation (orbit identification)</b>	<b>IMCC</b>	<b>image motion compensation and calibration</b>	<b>IRTM</b>	<b>Infrared Thermal Mapper Subsystem (VOS)</b>
<b>ICR</b>	<b>inductance, capacitance, resistance</b>	<b>IMCC</b>	<b>Integrated Mission Control Center (MSC, Houston)</b>	<b>IRU</b>	<b>inertial reference unit</b>
<b>ICR</b>	<b>ion cyclotron resonance</b>	<b>IMCC</b>	<b>Integrated Mission Control Center (MSC, Houston)</b>	<b>IRV</b>	<b>inter-range vector</b>
<b>ICRPG</b>	<b>Interagency Chemical Rocket Propulsion Group</b>	<b>IMLSS</b>	<b>integrated maneuvering and life support system</b>	<b>IS</b>	<b>isolated step</b>
<b>ICS</b>	<b>Internal Communication System (SFOF)</b>	<b>IMP</b>	<b>Image Processing Program (computer program)</b>	<b>ISA</b>	<b>Interface Switching Assembly (DSIF)</b>
<b>ICS</b>	<b>Intra-communication system</b>	<b>IMP</b>	<b>interim monitoring program</b>	<b>ISA</b>	<b>Instrument Society of America</b>
<b>ICST</b>	<b>Integrated Combined Systems Test</b>	<b>IMP</b>	<b>intermodulation product</b>	<b>ISAM</b>	<b>indexed sequential access method</b>
<b>ICSU</b>	<b>International Council of Scientific Unions</b>	<b>IMP</b>	<b>Interplanetary Monitoring Probe</b>	<b>ISAS</b>	<b>infrared small astronomical spacecraft</b>
<b>ICT</b>	<b>International Critical Tables</b>	<b>IMU</b>	<b>inertial measurement unit</b>	<b>ISCO</b>	<b>initial systems checkout</b>
<b>ICW</b>	<b>interrupted continuous wave</b>	<b>INTA</b>	<b>Instituto Nacional de Tecnica Aeroespacial (Spain)</b>	<b>ISI</b>	<b>Instrumentation Support Instruction (GCF TWX)</b>
<b>ID</b>	<b>identification</b>			<b>ISL</b>	<b>Instrument Standards Laboratory (DSIF)</b>

ID	identification data	Intelsat	International Telecommunications Satellite	ISO	International Organization for Standardization
ID	inside diameter				
IDA	Institute for Defense Analysis	I/O	input/output	ISO	isolation
IDAC	Integrated Data Acquisition and Control (JPL)	IOC	initial operational capability	iso amp	isolation amplifier
		IOC	interim operational capability	ISP	integrated shear plate
IDC	Internal Document Control	IOC	interoffice correspondence	IST	Integrated Systems Test
IDCPS	integrated dc power supply	IOM	interoffice memorandum	ISTS	Intersite Transmission Subsystem (GCF)
IDDP	isodecyl diphenyl phosphate	ION	ionospheric calibration program		
IDL	indentured drawing list	IOU	input-output-utility	ITB	Invitation to Bid
IDS	instrument data system	IP	input processor	ITD	interdata computers
IDS	integrated data store	IP	initial point	ITL	integrate, transfer and launch
IEC	integrated electronic control	IP	ionization potential	ITLC	instant thin layer chromatography
IECEC	intersociety energy conversion	IP	isolation pulse	ITS	integrated trajectory system
IEEE	Institute of Electrical and Electronics Engineers	IPL	image processing lab	IUCSTP	Inter-Union Commission on Solar Terrestrial Physics
		IPL	indentured parts list		
IF	intermediate frequency	IPL	initial program load	IUGG	International Union of Geodesy and Geophysics
IFAC	International Federation of Automatic Control	IPM	impulses per minute	IV	initial velocity
		IPM	incidental phase modulation	IV	intensifier vidicon
IGOR	Intercept Ground Optical Recorder	IPMS	International Polar Motion Service	IVT	intra-vehicular transfer
IGOSS	Integrated Global Ocean Station System	IPP	Impact Predictor Computer (Cape Kennedy)	JANAF	Joint Army-Navy-Air Force
		IPP	input processor programs	JAS	Job Accounting System
IGS	Inertial Guidance System	IPS	inches per second	JBES	Jodrell Bank Experimental Station (Cheshire, England)
IGS	instrumentation ground system				
IIP	instantaneous impact points	IQ SY	International Year of the Quiet Sun	J-box	junction box
IITRI	Illinois Institute of Technology Research Institute (formerly ARF)	IR	infrared	JCL	job control language
		IR	inspection report		(OS/360)
IL	in-lock	IRD	Interface Requirements Document		
IL	insertion loss	IRDG	Inter-Range Documentation Group	JCP	Joint Committee on Printing

<b>J-FACT</b>	<b>Joint Flight Acceptance Composite Test</b>	<b>L-band</b>	<b>frequency band between 390 and 1550 MHz</b>	<b>LIBSYS</b>	<b>Library System (Computer Program)</b>
<b>JILA</b>	<b>Joint Institute for Laboratory Astrophysics</b>	<b>LBPO</b>	<b>Lifting Body Program Office (NASA)</b>	<b>LID</b>	<b>leadless inverted device</b>
<b>JM</b>	<b>Junction Module (DSIF)</b>	<b>LC</b>	<b>launch complex</b>	<b>LLM</b>	<b>Lunar Landing Mission</b>
<b>JOBURG</b>	<b>Johannesburg, Republic of South Africa, NASA STADAN Station</b>	<b>LC</b>	<b>Library of Congress</b>	<b>LLR</b>	<b>line of least resistance</b>
<b>J-OCT</b>	<b>Joint Operational Compatibility Tests</b>	<b>LCD</b>	<b>least common divisor</b>	<b>LLRV</b>	<b>Lunar Landing Research Vehicle</b>
<b>JOD</b>	<b>joint occupancy date</b>	<b>LCE</b>	<b>Launch Complex Equipment</b>	<b>LLSA</b>	<b>Land Lines Assembly (GCF)</b>
<b>JPL</b>	<b>Jet Propulsion Laboratory (Pasadena, California)</b>	<b>LCM</b>	<b>least common multiple</b>	<b>LLSV</b>	<b>Lunar Logistic Supply Vehicle</b>
<b>JPL/ETR</b>	<b>Jet Propulsion Laboratory Field Station, Air Force Eastern Test Range</b>	<b>LCOSE</b>	<b>Launch Complex Operational Support Equipment</b>	<b>LM</b>	<b>lunar module (Apollo)</b>
<b>J-T</b>	<b>Joule-Thompson</b>	<b>LCP</b>	<b>left (-hand) circular polarization</b>	<b>LMSC</b>	<b>Lockheed Missiles and Space Company (Sunnyvale, California)</b>
<b>JTF</b>	<b>Joule-Thompson flow</b>	<b>LCS</b>	<b>large capacity storage</b>	<b>LMT</b>	<b>local mean time</b>
<b>JTHP</b>	<b>Joule-Thompson high pressure</b>	<b>LCS</b>	<b>launch complex set</b>	<b>LNA</b>	<b>low-noise amplifier</b>
<b>JVA</b>	<b>jet vane actuators</b>	<b>LCTT</b>	<b>Launch Complex Telemetry Trailer</b>	<b>LO</b>	<b>local oscillator</b>
<b>°K</b>	<b>degrees Kelvin</b>	<b>LD</b>	<b>length-diameter ratio</b>	<b>LO</b>	<b>Lunar Orbiter</b>
<b>KAUAIH</b>	<b>Koike Park, Kauai, Hawaii, NASA STADAN Station</b>	<b>LD</b>	<b>low density</b>	<b>LOC</b>	<b>Launch Operations Center (AFETR)</b>
<b>K-band</b>	<b>frequency band between 10.9 and 36.0 GHz</b>	<b>L:D</b>	<b>lift-drag ratio</b>	<b>LOD</b>	<b>Launch Operations Director (NASA)</b>
<b>KE</b>	<b>kinetic energy</b>	<b>LDD</b>	<b>lunar dust detector</b>	<b>LOFAR</b>	<b>low frequency acquisition and ranging</b>
<b>KPNO</b>	<b>Kitt Peak National Observatory (Tucson, Ariz)</b>	<b>LDR</b>	<b>light-to-dark ratio</b>	<b>LOFAR</b>	<b>low frequency analysis and recording</b>
		<b>LDR</b>	<b>low-density recorder</b>	<b>LOH</b>	<b>light observation helicopters</b>
		<b>LDTM</b>	<b>lander dynamic test model</b>	<b>LOI</b>	<b>lunar orbit insertion</b>
		<b>LE</b>	<b>lunar ephemeris</b>	<b>long</b>	<b>longitude</b>
		<b>LED</b>	<b>light-emitting diode</b>	<b>LOR</b>	<b>lunar orbit rendezvous</b>
		<b>LEAP</b>	<b>Lifetime Element Advancing Program</b>	<b>Loran</b>	<b>long range navigation system</b>
		<b>LEB</b>	<b>lower equipment bay</b>	<b>LOS</b>	<b>loss of signal</b>
				<b>LOV</b>	<b>loss of view</b>
				<b>LOX</b>	<b>liquid oxygen</b>

KPSM	klystron power supply modulator	LEID	low energy ion detector	LP	linear phase
KSC	Kennedy Space Center, Cape Kennedy, Florida	LEIS	Lander Electrical Interface Simulator	LP	linear polarization
KSC/ULO	Kennedy Space Center/Unmanned Launch Operations	LEM	Lunar Excursion Module	LP	linear programming
KSC-WTROD	KSC Western Test Range Operations Division (NASA, Lompoc, Calif.)	LEO	Lunar Exploration Office (NASA)	LP	liquid propellant
KSR	teletype keyboard send-receive unit	LEOT	left-end-of-tape	LP	low pressure
KWIC	keyword-in-context	LEPEDEA	low-energy proton and electron differential analyzer	LP	low pass
KWOC	keyword-out-of-context	LeRC	Lewis Research Center (Cleveland, Ohio)	LPA	Launch Phase Analyst
L	time of launch	LES	Launch Escape System	LPCA	Lunar Pyrotechnic Control Assembly
LADAR	laser doppler radar	LESS	Lunar Escape System	LPE	Lunar and Planetary Ephemerides Assembly (SFOF)
LADT	low-altitude drop test (VOS)	LF	low frequency (30 to 300 kHz)	LPHS	lunar and planetary horizon scanner
LAMC	last maneuver calculation (orbit identification)	L/F	line feed (TTY symbol)	LPIA	Liquid Propellant Information Agency (John Hopkins University)
LAN	longitude of the ascending node	LFC	lunar facsimile capsule	L&PP	Lunar and Planetary Programs
LAPM	Last Pre-Midcourse Orbit	LFOS	Launch and Flight Operations System	LR	long range
LARTS	Los Angeles Regional Transportation System	LGA	low-gain antenna	LRC	Langley Research Center (Hampton, Virginia)
LAS	large astronomical satellite	LGE	lunar geology experiment	LRES	long-range earth sensor
LASA	large area solar array	LH	left hand	LRL	Lawrence Radiation Laboratory (AEC)
LASER	light amplification by stimulated emission of radiation	LH	left-handed	LRL	Lunar Receiving Laboratory (NASA)
LASL	Los Alamos Scientific Laboratory	LH	local horizontal	LRRR	laser ranging retro-reflector
LASP	Laboratory for Atmospheric and Space Physics (Boulder, Colorado)	LHA	local hour angle	LRS	lander radio subsystem
LAT	Local Apparent Time	LIBACC	Library Acquisition Program (Computer Program)	LRV	Lunar Roving Vehicle
lat	latitude	LIBMRG	Library Merge Program (Computer Program)	LS	low speed
		LIBSET	Library Set (Computer Program)	LSI	large-scale integrated (circuit)
				LSM	lunar surface magnetometer
				LSP	lunar survey probes
				LSSM	local scientific survey module

LSSM	Lunar Surface Scientific Modules	MCC-H	Mission Control Center, Houston	MESS	Magnetic Emulsion Spectrometer System
LSTM	lander static test model	MCC-K	Mission Control Center, Cape Kennedy	MESS	mechanical electronic subassembly simulator (UV photometer replacement on Mariner)
LTM	life test model	MCD	megawatt cassegrain diplexer	MEW	microwave early warning
LTRS	Letters (Teletype Lower Case)	MCD	monitor criteria data	MF	machine finish
LTS	laboratory test set	MCDG	Monitor Criteria Data Set Generation Processor Assembly (SFOF)	MF	medium frequency (300 to 3000 kHz)
LTV	Life Test Vehicle	MCE	media conversion equipment	MF	metallic film
LUB	least upper bound	MCF	Multiple Cassegrain Feed (DSIF)	MFCO	manual fuel cutoff
LV	launch vehicle	MCG	memory character generator	MFP	master file program
L/V	launch vehicle (alternate for LV, used by JPL convention)	MCIM	Midcourse Maneuver (computer program)	MFP	mean free path
LVDT	linear-variable differential transformer	MCM	Megawatt Cassegrain Monopulse	MFSK	multiple-frequency shift keying
LVMP	launch vehicle mission peculiar	MCR	Mission Control Room (SFOF)	MG	motor generator
LVPP	Launch Vehicle & Propulsion Program (NASA)	MCS	Monitor and Control System (DSIF)	MGA	medium-gain antenna
LWP	Langley Working Paper (NASA)	MCSS	Monitor and Control Subsystem (DSIF)	MGC	manual gain control
M	time of maneuver	MCUIS	Master Control and User Interface Software Subsystem (SFOF)	MHD	magnetohydrodynamics
MAC	maneuver analysis and command	MCVG	memory character vector generator	MI	mission independent
MAC	mean aerodynamic center	MCW	modulated continuous wave	MIA	mission-independent area (DSIF)
MACG	Maneuver Analysis and Command Group	MD	metals disintegrating	MIC	memory interface connection
MAD	Madrid, Spain, NASA MSFN Station	MD	mission dependent	MICCS	Minuteman Integrated Command and Control System
MA&D	mission analysis and design	M-D	modulation-demodulation	MICS	Management Information and Control System
MADAM	Moderately Advanced Data Management	MDA	motor drive amplifier	MIDAS	Missile Defense Alarm System
		MDA	multiple docking adapter	MIE	mission-independent equipment

<b>MADGAR</b>	Tananarive, Malagasy Republic, NASA STADAN Station (STADAN designation)	<b>MDB</b>	Mission Display Board Assembly (SFOF)	<b>MIL</b>	Merritt Island, Florida, NASA MSFN Station
<b>MADX</b>	Madrid, Spain, NASA MSFN Station (at DSS 61)	<b>MDC</b>	mild detonating cord	<b>MILA</b>	Merritt Island Launch Area
<b>MA&amp;E</b>	Mission Analysis and Engineering	<b>MDCX</b>	Monitor Criteria Data Program	<b>MILS</b>	Missile Impact Location System
<b>magamp</b>	magnetic amplifier	<b>MDE</b>	mission-dependent equipment	<b>MIPS</b>	Miniature Implantable Power System
<b>MAMS</b>	Multiple Access to Memory System	<b>MDG</b>	Mission Definition Group	<b>MIR</b>	memory-information register
<b>MAR</b>	Mission Analysis Representative	<b>MDI</b>	mission-dependent interface	<b>MIS</b>	Management Information System
<b>MARS</b>	Multiple Artillery Rocket System	<b>MDL</b>	master data library	<b>MIS</b>	metal insulator semiconductors
<b>MAS</b>	Memory and Auxiliary Storage Sub-system (SFOF)	<b>MDL</b>	minimum detection limit	<b>Mistram</b>	Missile Trajectory Measurement
<b>mascon</b>	mass concentration	<b>MDPR</b>	Madrid predict (orbit identification)	<b>MIT</b>	Massachusetts Institute of Technology
<b>MASER</b>	Microwave Amplification by Stimulated Emission of Radiation	<b>MDR</b>	Master Data Record	<b>MIT</b>	Merritt Island Station
<b>MAT</b>	Molecular Analysis Team	<b>MDROC</b>	mission design requirements, objectives and constraints	<b>MITOC</b>	Missile Technical Operations Communications System (AFETR)
<b>MATS</b>	mission analysis and telemetry simulation	<b>MDS</b>	Modulate-Demodulate Subsystem	<b>MITR</b>	MIT Research Reactor
<b>MAWD</b>	Mars atmospheric water detection (VOS)	<b>MDSCC</b>	Madrid Deep Space Communications Complex	<b>MLA</b>	Merritt Island, Florida, USAF ETR Station 19
<b>MC</b>	memorandum of conditions	<b>MDT</b>	mean downtime	<b>MLE</b>	Maximum likelihood estimator
<b>MC</b>	midcourse	<b>MDT</b>	Mountain Daylight Time	<b>MLSP</b>	Multiple-Link Satellite Program
<b>MC</b>	Mission Control	<b>ME</b>	master equatorial	<b>MM</b>	Maintenance Monitor
<b>M/C</b>	Midcourse	<b>MECO</b>	Main Engine Cutoff (Centaur)	<b>MM</b>	Mariner Mars Project
<b>MCC</b>	Media Conversion Center (SFOF)	<b>MED</b>	manual entry device	<b>MMC</b>	Martin Marietta Corporation
<b>MCC</b>	Mission Control Center (SFOF)	<b>MEDUSA</b>	Multiple-Element Directional Universally Steerable Antenna	<b>MMCD</b>	Master Monitor Criteria Data File
<b>MCCA</b>	Media Conversion Computer Assembly (SFOF)	<b>MEI</b>	main engine ignition	<b>MMDC</b>	Mount Misalignment Data Collection Routine
		<b>MEIG</b>	main engine ignition	<b>MMH</b>	Monomethylhydrazine (rocket propellant)
		<b>MEIGN</b>	main engine ignition		
		<b>MES</b>	Main Engine Start		

<b>MMSA</b>	<b>Multiple-Mission Support Area (SFOF)</b>	<b>MPD</b>	<b>Maintenance Policy Document (DSIF)</b>	<b>MTD</b>	<b>master tracking data</b>
<b>MMSE</b>	<b>minimum mean square error</b>	<b>MPE</b>	<b>mission-peculiar equipment</b>	<b>MTDF</b>	<b>Master Tracking Data File</b>
<b>MMSE</b>	<b>multiple-mission support equipment</b>	<b>MPF</b>	<b>Multiple Primary Feed (DSIF)</b>	<b>MTF</b>	<b>megawatt transmitter filter</b>
<b>MMSR</b>	<b>multiple-mission support recording</b>	<b>MPFS</b>	<b>Multiple Primary Feed System</b>	<b>MTF</b>	<b>Microwave Test Facility</b>
<b>MMT</b>	<b>multiple-mission telemetry</b>	<b>MPI</b>	<b>mean point of impact</b>	<b>MTF</b>	<b>Mississippi Test Facility (NASA)</b>
<b>MMTS</b>	<b>Multiple Mission Telemetry System</b>	<b>MPLS</b>	<b>maximal principle least squares</b>	<b>MTF</b>	<b>modulation transfer function</b>
<b>MO</b>	<b>Mission Operations (NASA)</b>	<b>MPMS</b>	<b>multiple-pressure measuring system</b>	<b>MTGS</b>	<b>Midcourse and Terminal Guidance System</b>
<b>MO</b>	<b>mission oriented</b>	<b>MPS</b>	<b>main power switch</b>	<b>MTM</b>	<b>mechanical test model</b>
<b>M&amp;O</b>	<b>maintenance and operations</b>	<b>MR</b>	<b>memory register</b>	<b>MTR</b>	<b>Materials Testing Reactor (Argonne National Laboratories)</b>
<b>MOA</b>	<b>Memorandum of Agreement</b>	<b>MRB</b>	<b>Material Review Board</b>	<b>MTS</b>	<b>missile test stand</b>
<b>MOC</b>	<b>Master Operational Console</b>	<b>MRB</b>	<b>Mission Review Board</b>	<b>MTS</b>	<b>mobile tracking station</b>
<b>MOC</b>	<b>Memorandum of Conditions</b>	<b>MRF</b>	<b>megawatt receiver filter</b>	<b>MTTF</b>	<b>mean time to failure</b>
<b>MOC</b>	<b>Mission Operations Center (Building AO, Cape Kennedy, Florida)</b>	<b>MRH</b>	<b>mission-related hardware</b>	<b>MTVS</b>	<b>Mission Test and Video System (SCF)</b>
<b>M&amp;OC</b>	<b>Monitor and Operations Control System (SFOF)</b>	<b>MRS</b>	<b>mission-related software</b>	<b>MU</b>	<b>Sequential Planetary Ranging System (DSIF)</b>
<b>MOCSW</b>	<b>Monitor and Operations Control Software Subsystem (SFOF)</b>	<b>MRSD</b>	<b>mission requirements on system design</b>	<b>MUF</b>	<b>maximum usable frequency</b>
<b>MODEM</b>	<b>modulator-demodulator</b>	<b>MS</b>	<b>margin of safety</b>	<b>MUI</b>	<b>mass unbalance input</b>
<b>MODET</b>	<b>mortar detection</b>	<b>MS</b>	<b>millisecond clock</b>	<b>MUS</b>	<b>mass unbalance spin</b>
<b>mods</b>	<b>modifications</b>	<b>MSA</b>	<b>Mission Support Area</b>	<b>MUSA</b>	<b>Multiple-Unit Steerable Antenna</b>
<b>MOE</b>	<b>mission-oriented equipment</b>	<b>MSB</b>	<b>Mission Status Board (SFOF)</b>	<b>MUSTARD</b>	<b>Multiunit Space Transport and Recovery Device</b>
<b>MOI</b>	<b>Mars orbit insertion</b>	<b>MSB</b>	<b>most significant bit</b>	<b>mux</b>	<b>multiplex</b>
		<b>MSC</b>	<b>Manned Spacecraft Center (Houston, Texas)</b>	<b>muxmod</b>	<b>multiplex modulation</b>
		<b>MSCC</b>	<b>Manned Space Control Center</b>	<b>MV</b>	<b>Mariner Venus Project</b>

MOI	moment of inertia	MSD	Materials and Structures Division (NASA)	MV	multivibrator
MOIS	Mission Operations Intercommunication System	MSD	most-significant digit	MVC	Master Vellum Center (JPL)
MOJAVE	Goldstone, California, NASA STADAN Station	MSE	Maintenance Support Equipment (DSIF)	MVM	Mariner Venus-Mercury Project
MOL	Manned Orbiting Laboratory	MS/EMI	mission sequence/electromagnetic interference	MVS	Mission Video System
Molsink	Molecular Sink Laboratory	MSFC	Marshall Space Flight Center (Huntsville, Alabama)	MWS	megawatt waveguide switch
MON	Monitor System (DSN)	MSFN	Manned Space Flight Network (now incorporated into the Goddard Network)	mx	multiplex
MONA	Monitor Assembly (GCF)	MSFSRD	Manned Space Flight Support Requirements Documentation	MXK	Multiple-Frequency X- and K-Band (feed cone)
MOP	matrix operations programming	MSI	medium scale integrated circuit	N	north (latitude)
MOP	Mission Operations Plan	MSL	mean sea level	NA	narrow angle
MOPCOM	matrix operations programming combination of estimates	MSO	Management Systems Office (NASA)	NA	not applicable
MOPS	Maneuver Operations Program System	MSP	Maintenance Support Program (DSIF)	NA	not available
MOPS	Missile Operations Paging System	MSR	mission support recording (DSIF)	NAA	narrow-angle acquisition
MORL	Manned Orbital Research Laboratory	MSRR	Mission and System Requirements Review	NAA	Network Analysis Area (SFOF)
MOS	metal oxide semiconductor	MSSVCG	minimum steady-state variance	NACA	National Advisory Committee on Aeronautics
MOS	Mission Operations System	MST	Mountain Standard Time	NAMG	narrow-angle Mars gate
MOSFET	metal oxide semiconductor field effect transistor	MT	master timer (CC&S command)	NAP	nuclear auxiliary power
MOU	Memorandum of Understanding	MTBF	mean time between failures	NAPO	NASA Pasadena Office
MP	manpower	MTC	Mission and Test Computer (1230/1219)	NAPU	nuclear auxiliary power unit
MP	mid-phase			NAR	noise-adding radiometer
MPAD	Mission Planning and Analysis Division			NAR	North American Rockwell Corp.
MPD	magnetoplasmadynamic			NASA	National Aeronautics and Space Administration
				NASAP	Network Analysis for Systems Application Program
				NASC	National Aeronautics and Space Council

NASCOM	NASA Communications Network (world-wide)	NOAA	National Oceanic and Atmospheric Administration (Dept. of Commerce)	NTIS	National Technical Information Service
NASCOP	NASA Communications Operating Procedure	NOCC	Network Operations Control Center (MSFN)	NTL	Nuclear Thermionics Lab
NAS-NRC	National Academy of Sciences-National Research Council	NOD	Network Operations Directive (MSFN)	NTO	nitrogen tetroxide (N <sub>2</sub> O <sub>4</sub> )
NAT	Network Analysis Team	NOM	Network Operations Manager (MSFN)	NTP	normal temperature and pressure
NASTRAN	NASA Structural Analysis (Computer Program)	NOP	Network Operations Procedure (MSFN)	NTR	new technology report
NATO	North Atlantic Treaty Organization	NOPA	Network Operations Performance Analysis	NTS	NASA Test Support
NB	narrow band	NOR	Not Operationally Ready	NTSC	Centaur Missions Office, NASA Test Support
N/B	noise power/bandwidth	NPC	NASA Publication Control	NTSO	NASA Test Support Office
NBS	National Bureau of Standards	NPD	NASA Policy Directive	NTTF	Network Test and Training Facility (GSFC)
NBS-A	Atomic Time as kept by NBS	NPD	Nuclear Power Demonstration (reactor, Des Joachines, Canada)	NUDETS	Nuclear Detection and Reporting System
NBS (UTC)	Universal Time Code as kept by NBS	NPL	National Physical Laboratory (British agency similar to Bureau of Standards)	OA	Office of Administration (NASA)
NBVCXO	narrow-band voltage-controlled crystal oscillator	NPS	north polar sequence	OA	Operations Advisor (JPL/ETR)
NCAR	National Center for Atmospheric Research (Boulder, Colo.)	NRAO	National Radio Astronomy Observatory (Greenbank, W. Va.)	OA	Operations Area
NCG	Network Control Group (MSFN)	NRC	National Research Council of the National Academy of Sciences	OAA	optical acquisition aid (DSIF)
NCI	National Cancer Institute	NRC	Network Reliability Coordinator	OAE	optical alignment equipment
NCO	number-controlled oscillator	NRD	National Range Division (USAF)	OAMS	orbital attitude maneuvering system
NCP	Net Control Procedure			OAQ	Orbiting Astronomical Observatory
NCV	normalized critical view			OAR	Operations Analysis Report
NDL	Numerical Drawing List			OART	Office of Advanced Research and Technology (NASA)
NDRO	nondestructive readout			OAS	Office for Advanced Studies

NEMO	Naval Experimental Manned Observatory	NRDS	Nuclear Rocket Development Station (AEC test site, Jackass Flats, Nev.)	OASR	Office of Aeronautical and Space Research (NASA)
NEP	near-Earth phase	NRL	Naval Research Laboratory	OAT	operating ambient temperature
NEP	negative equally probable	NROO	Naval Reactors Operations Office (AEC, Schenectady, N.Y.)	OATA	Optical Acquisition and Tracking Aid Assembly
NEP	noise equivalent power	NRT	near-real time	OATM	orbiter antenna test model (VOS)
NEPA	National Environmental Policy Act	NRT	nonreal time	OC	Operations Chief (DSN)
NEPN	Near-Earth Phase Network	NRTC	Nonreal-Time Conversion Subsystem (SFOF)	OCC	Operations Control Center
NEROC	North East Radio Observatory Corp.	NRTS	Nuclear Reactor Testing Station (AEC, Idaho Falls, Idaho)	OCC	Operations Control Center
NERV	Nuclear Emulsion Recovery Vehicle	NRZ	nonreturn to zero	OCR	optimum charge regulator
NETCOM	Network Control Communications (DSIF)	NRZ-C	nonreturn to zero change	OCR	optical character recognition
NETCON	Net Control (call sign)	NRZ-M	nonreturn to zero mark	OCT	Operations Control Team (DSN)
NETDS	Near-Earth Tracking and Data System	NSCA	NASCOM Assembly (GCF)	OCT	Operations Control Team (DSN)
NEWFLD	St. John's, Newfoundland, NASA STADAN Station	NSE	natural space environment	OCV	open circuit voltage
NFM	noise-figure meter	NSF	National Science Foundation	OD	Operations Directive (UDS)
NHB	NASA Handbook	NSIA	National Security Industrial Association	OD	orbit determination
NIB	Noninterference Basis	NSO	Network Support Office	OD	outside diameter
NIH	National Institute of Health	NSP	NASA Support Plan	ODC	Operational Data Center/DSN
NIM	Non-Interrupt Mode	NSRDS	National Standard Reference Data System (NBS)	ODC	Operational Document Control
NITR	National Institute for Telecommunications Research (South Africa)	NSS	Nodding Subdish System	ODC	oscilloscope digital control
NLD	NASA Launch Director	NSSC	Naval Ship Systems Command	ODDP	octyl diphenyl phosphate
NLM	National Library of Medicine	NSSDS	National Space Science Data Center (NASA, Goddard)	ODE	Orbit Data Editor Assembly (SFOF)
NMI	NASA Management Instruction	NST	Network Support Team	ODG	orbit data generator program (SFOF IBM 7094)
NMM	NASA Management Manual			ODP	Orbit Determination Program
NMR	nuclear magnetic resonance			ODR	Original Data Record
NMSG	NASCOM Network Scheduling Group			ODS	orbiter dynamic simulator (VOS)
NO	Naval Observatory			ODT	Operational Demonstration Test
				ODTM	orbiter dynamic test model (VOS)
				OEIS	orbiter electrical interface simulator (VOS)

OEPS	Office of Educational Programs and Services (NASA)	OPSCOP	Operations Control (Monitor) Program	OVRS	Operational Voice Recording Subsystem
O/F	oxidant/fuel-weight flow ratio	OPS-X	operational teletype message (non-data)	OVT	Operational Verification Test
OFHC	oxygen-free high conductivity			P	pulse
OGC	Office of General Counsel (NASA)	OR	Operations Requirements (UDS)	PA	power amplifier
OGO	Orbiting Geophysical Observatory	ORACT	Operational Readiness and Confidence Test	PA	Program Authority
OHM	Office of Hazardous Materials (Dept. of Transportation)	ORBIS	Orbiting Radio Beacon Ionospheric Satellite	PA	public address (audio system)
OI	orbit insertion			PA	pulse amplifier
OIA	Office of International Affairs (NASA)	ORDEAL	Orbit Rate Display-Earth and Lunar	PAD	Project Approval Document
OIA & TU	Office of Industry Affairs and Technology Utilization (NASA)	ORDET	orbit determination group	PADA	Public Address Assembly (GCF)
OIC	Officer in Charge	ORDIR	omnirange digital radar	PAF	payload attachment fitting
OIM	orbit insertion maneuver	ORNL	Oak Ridge National Laboratory (AEC, Tenn.)	PAFB	Patrick Air Force Base
OJT	on-the-job training	ORS	orbiter relay simulator (VOS)	PAG	Parts Acquisition Group
OLA	Office of Legislative Affairs	ORT	Operational Readiness Test	PAM	pulse-amplitude modulation
OLF	orbital launch facility	ORTEC	Oak Ridge Technical Enterprises Corp.	PAO	Public Affairs Office
OLO	orbital launch operations	OS	operating system	PAP	Physics & Astronomy Programs (NASA)
OLP	optical line pair	OSDP	on-site data processing	paramp	parametric amplifier
OLV	orbital launch vehicle	OSE	operational support equipment	PAS	perigee - apogee satellites
OLR	open-loop receiver (DSIF)	OSEDS	Operational Support Equipment Design Specification	PAS	Public Address Subsystem
OM	Operations Manager	OSFD	Office of Space Flight Development (NASA)	PAS	pyrotechnics arming switch
OMAS	Operational Miscellaneous Audio Subsystem	OSFM	Office of Spacecraft and Flight Missions (NASA)	PA/SP	positioner antenna and solar panel
OMB	Office of Management & Budget			PASS	Private Alarm Signalling System
				PAT	Patrick Air Force Base, Cocoa Beach, Florida, USAF ETR Station O
				PATE	programmed automatic telemetry (tape) evaluator

OMD	Office of Management Development (NASA)	OSIS	Office of Scientific Information Service (National Science Foundation)	PB	pentaborane (rocket fuel)
OMR	Operations Manager's Report			PBAA	polybutadiene acrylic acid
OMSF	Office of Manned Space Flight (NASA)	OSM	omni spectra miniature	P-band	frequency band between 225 and 390 MHz
ONERA	Office National d'Etudes et de Recherches Aeronautiques	OSO	Orbiting Solar Observatory	PBNA	phenyl beta naphthylamine
ONR	Office of Naval Research	OSRD	Office of Scientific Research & Development	PC	pericynthion (perilune or low point in lunar orbit)
OOL	out of lock	OSRS	Operational Status Recording Subsystem	PC	program control
OOM	Office of Organization and Management (NASA)	OSS	Office of Space Sciences (NASA)	P-C	polar to Cartesian
OP	Office of Policy (NASA)	OSSA	Office of Space Science Applications (NASA)	PCA	Power Conditioning Assembly
OPA	Office of Public Affairs (NASA)	OST	Office of Science & Technology	PCA	Pyrotechnics Control Assembly
OPAS	Operational Public Address System	OT	overtime	PC&A	Project Control and Administration
OPE	Operational Planning Estimate	OTA	optical tracking aid (DSIF)	PCB	printed circuit board
OPE	optical pointing error	OTC	Overseas Telecommunications Corporation	PCD	prelaunch analysis of probability
OPE	outer planetary explorer			PCE	power conditioning equipment
OPGT	Outer Planets Grand Tour	OTCM	orbiter thermal control model (VOS)	PCM	pulse-code modulation
OPI	Office of Public Information (NASA)	OTCS	Operational Teletype Communications Subsystem	PCP	prototype communications processor
OPM	Outer Planet Mission			PCQ	Professional Capabilities Questionnaire (JPL)
OPP	Outer Planet Project	OTDA	Office of Tracking and Data Acquisition (NASA)	PCS	Personnel Capabilities System (JPL)
OPPE	Operations Planning Project Engineer (DSIF)	OTES	orbiter thermal effects simulator (VOS)	PCT	Periodic Confidence Test
OPR	Office of Primary Responsibility (JPL)			PCTFE	polychlorotri fluoro-ethylene
OPS	Operations Control System (DSN)	OTS	operational time sync	PCU	power control unit
ops	operations	OUA	Office of University Affairs (NASA)	PCUC	Positive Continuous Ullage Control
OPSCON	DSN Operations Control Chief	OVCS	Operational Voice Communications System (SF0F)	PD	planning document
				PD	potential difference
				PD	procurement drawing

PD	project document	PIV	planet in view	PPM	pulse-position modulation
PDC	Permission Documentation Change	PIV	propellant isolation valve	PPO	polyphenylene oxide
PDF	probability density function	pixel	picture element	PPO	polypropylene oxide
PDI	Project Data Index (JPL)	PLAC	post-launch analysis of compliance	PPS	primary propulsion system
PDL	Project Document List	PLANET	Planned Logistics Analysis and Evaluation Technique	PPS	pulses per second
PDM	pulse-duration modulation			PQ	planetary quarantine
PDP	Program Development Plan	PLAS	post-landing attitude determination (computer program mnemonic)	PQA	parts quality assurance
PDP	programmed data processor			PQP	Planetary Quarantine Plan
PDP	programmed digital processor	PLATO	Platform Observables Subassembly (360/75)	PR	Progress Report
PDP	Project Development Plan			PR	pseudo-residual
PDR	preliminary design review	PLF	phone line formatter	PRD	Program Requirements Document (UDS)
PDT	Pacific Daylight Time	P-List	Problem List	PRD	Project Requirements Document
PDT	performance demonstration test	PLL	phase locked loop	Prdx	Prediction Program
PE	potential energy	PLM	pulse-length modulation	PRE	Pretoria, South Africa, USAF ETR Station 13
PE	probable error	PLO	programmed local oscillator		
PE	programmed exciter	PLSS	Portable Life Support System	PREL	preliminary evaluation (orbit identification)
PE	Project Engineer	PM	permanent magnet		
PEGM	Planetary Encounter Geometry and Science Instrument Sequence Program	PM	phase modulation	PRF	pulse-repetition frequency
		PM	preventive maintenance	PROR	predict (orbit identification)
PEL	precision elastic limit	PMA	planetary microbiological assay	pror	predicted orbit
PEP	Planetary Exploration Plan	PMG	Postmaster General (Australia)	PRP	pseudo-random pulse
PER	parity error rate	PMIS	Personnel Management Information System (NASA)	PRPP	Pseudo-Residual Plot Program
PER	Preliminary Engineering Report	PML	Parts Material List	PRR	pulse-repetition rate
PERT	Program Evaluation and Review Technique	PMP	premodulation processor	PRRM	Program Review and Resources Management (NASA)
		PMR	power monitor relay	PSAC	President's Scientific Advisory Committee
PES	photoelectric scanner	PMR	Project Management Report		

PET	probe ephemeris tape	PMT	photomultiplier tube	PSC	Physical Sciences Center
PF	perchloryl fluoride (rocket liquid propellant oxidizer)	PN	part number	PSC	processing and spectral control
PF	power factor	PN	pseudo noise	PSD	phase-sensitive detector
PF	proximity fuse	PN	pseudorandom noise	PSD	power spectral density
PFDA	precision frequency distribution amplifier	PNG	pseudonoise generator	PSD	processing status display (SFOF DPCS)
PFM	pulse-frequency modulation	PNP	Precision Navigation Project	PSE	Passive Seismic Experiment
PFR	Problem/Failure Report	PO	post orbit	Pseudo-Resid	Pseudo-Residual Processor Assembly (SFOF)
PGDS	Pioneer Ground Data System	PO	programmed oscillator	PSK	phase-shift keyed
PHA	pulse-height analysis	P/O	parking orbit	PSL	power source logic
PHD	pulse-height discrimination	POAA	Planetary Operations Analysis Area	PS&L	power switching and logic
PHDR	preliminary hardware design review	POC	productional operational capability	PSNR	power signal-to-noise ratio
PHF	pulse-height analyzer	POGASIS	Planetary Observation Geometry and Science Instrument Sequence Program	PSO	planet sensor output
PHP	planetary horizontal platform	POGO	Polar Orbiting Geophysical Observatory	PSP	Program Support Plan (UDS)
PHVPS	primary high-voltage power supply	POP	Program Obligation Plan	PSR	Pad Safety Report
PI	principal investigator	POST	postmidcourse (orbit Identification)	PSRD	Program Support Requirements Document
PI	Program Introduction (UDS)	POT	Parallel Output	PSS	Planetary Scan Subsystem
PI	programmed instruction	POWM	powered flight (computer program)	PSS	propulsion subsystem structure
PIC	Project Information Center	PP	Planetary Programs (NASA)	PST	Pacific Standard Time
PICS	Procurement Information Control System (NASA)	P/P	peak to peak	PSTF	Pioneer Station Training Facility
PIFOV	planet in field of view	PPE	portable purge equipment	PT	paper tape
PIN	parallel input	PPF	phase pushing factor	PTC	proof test capsule
PIN	P-intrinsic-N	PPI	plan position indicator	PTM	proof test model (S/C)
PIO	Public Information Office	PPI	Project Procurement Instructions (JPL)	PTM	pulse-time modulation
PIP	Project Implementation Plan	PPL	Preferred Parts List	PTO	proof test orbiter (VOS)
PIPS	Postinjection Propulsion Subsystem			PT-S/C	proof test spacecraft

PU propellant utilization  
 PUCU Propellant Utilization Control Unit  
 PV planetary vehicle  
 PVT Performance Verification Test  
 PVT pressure-volume-temperature  
 PWM pulse width modulation  
 PWR Power Subsystem (spacecraft)  
 PZT photographic zenith tube  
 QA quality assurance  
 QAI Quality Assurance Instruction  
 QA&R quality assurance & reliability  
 Q-band frequency band between 36 and 46 GHz  
 QC quality control  
 QC quantitative command  
 QSR Quarterly Summary Report  
 QTM qualification test model  
 QTR Quarterly Technical Review (JPL formal publication)  
 QTU qualification test unit  
 R range  
 RA radar altimeter  
 RA right ascension  
 RACC Remote ARIA Control Center (Wheeler AFB, Hawaii)  
 RACR Resources Allocation Change Request

RECON Remote Console (NASA On-Line Information Retrieval System; JPL has terminal)  
 REIC Radiation Effects Information Center (Batelle Memorial Institute)  
 REOT right-end-of-tape  
 RER receiver/exciter ranging  
 RETMA Radio-Electronics-Television Manufacturers Association  
 RF radio frequency  
 RFA request for action  
 RFI radio frequency interference  
 RFNA red fuming nitric acid  
 RFP Request for Programming  
 RFP Request for Proposal  
 RFQ Request for Quotation  
 RFS Radio Frequency Subsystem (S/C)  
 RFT real Fourier transform  
 RFTC radio frequency test console  
 RH relative humidity  
 RH right hand  
 RHI range-height indicator  
 RIC Remote Information Center  
 RIG radio inertial guidance  
 RIM read-in mode

RS reset-set (flip-flop)  
 RSC range safety command  
 RSC range safety control  
 RSE Reference Standards Equipment (DSIF)  
 RSL Reference Standards Laboratory (DSIF)  
 RSO Range Safety Officer  
 RSP rotation in a selected plane  
 RSR Resources Status Report  
 RSRs Radio Space Research Station  
 RSS radio subsystem  
 RT real time  
 RT room temperature  
 R-T receive-transmit  
 R-T receiver-transmitter  
 RTC real-time command  
 RTC real-time computer  
 RTCC Real-Time Computer Complex (MCC-H)  
 RTCF Real-Time Computing Facility  
 RTCS Real-Time Computing System (AFETR)  
 RTD resistive temperature device  
 RTDT Real-Time Data Translator  
 RTF real-time Fortran

RAD	random access disk	RIMD	Resources & Institutional Management Division (NASA)	RTG	radio-isotope thermoelectric generator
R&AD	research and advanced development	RIS	Range Instrumentation Ship	RTI	referred-to-input
RADVS	radar altimeter and doppler velocity sensor	RIS	rotatable initial susceptibility	RTIO	Real-Time Input/Output Interface Subsystem (SFOF)
RAES	Radio Astronomy Experiment Selection Panel	RL	resistance-inductance	RTL	round-trip light time
RAM	Radio Attenuation Measurement Project	RLC	receive logic chassis	RTM	Radiation Test Model
RAP	Residual Analysis Program (SFOF)	RLP	rotating linear polarization	RTMSW	Real-Time DSN Monitor Software Assembly (SFOF)
RAS	Relay Antenna Subsystem (VOS)	RMS	retromotor simulator	RTO	Referred-to-Output
RAST	Reliability and System Test	RNA	ribonucleic acid	RTOP	Research and Technology Operating Plan (NASA)
RATAC	Radar Target Acquisition (system)	RNG	Ranging System (DSIF)	RTOS	Real-Time Operating System (Houston)
RBE	relative biological effectiveness	RO	receive only (teletype)	RTPM	real-time program management
RC	resistance-capacitance	R/O	readout	RTS	Radio Telemetry Subsystem
RC	resistance-coupled	R&O	Requirements and Objectives	RTS	Relay Telemetry Subsystem (VOS)
RCA	reaction control assembly	RORA	reliable operate radar altimeter	RTSDS	Real-Time Scheduling Display System
RCC	Range Control Center	ROTI	Recording Optical Tracking Instrument	RTTS	Real-Time Telemetry System
RCO	Range Control Officer	RP	rocket propellant	RTTY	radio teletypewriter
RCP	right(-hand) circular polarization	RPA	random phase approximation	RTV	reentry test vehicle
RCS	Reaction Control System	RPA	retarding potential analyzer	RTV	Room-Temperature Vulcanizing compound
RCS	Reentry Control System	RPI	relay position indicator	RTZ	return to zero
RCV	Receiver/Exciter Subsystem (DSIF)	R&PM	Resources and Program Management	RU	range unit
rcvr	receiver	RQAO	Reliability & Quality Assurance Office (NASA)	RV	reentry vehicle
R&D	research and development	RR	rendezvous radar	RV	roving vehicle
RDA	Ranging Demodulator Assembly (DSIF)	RRA	resident research associate		
RE	receiver/exciter	R/RC	Removal/Re-Certification		
REC	Recording Subsystem (DSIF)	RRR	Range and Range-Rate System		
		RRS	Relay Radio Subsystem (VOS)		

RWC	read, write, and compute	SCA	Simulation Conversion Assembly (DSIF)	SDAT	Spacecraft Data Analysis Team
RWC	read(write), continue	SCAL	STAR computer assembly language	SDB	Spacecraft Design Book
RWV	read-write-verify command equipment (DSIF mission-dependent)	SCAM	Station Control and Monitoring	SDC	signal data converter
RZ	return to zero	SCAMA	Signaling, Conferencing and Monitoring Arrangement (NASCOM voice circuit)	SDCC	Simulation Data Conversion Center (SFOF)
S	separation			SDCS	science data conditioning system
S	south (latitude)	SCAN	Scientific Current Aerospace Notices (NASA)	SDCS	simulation data conversion system
S/A	subassembly			SDDS	signal data demodulator set
S&A	safe and arm	SCAS	Southwest Center for Advanced Studies	SDFC	Space Disturbance Forecast Center
SAA	S-Band Acquisition Antenna (DSIF)			SDL	Standard Distribution List (NASA)
SABRE	self-aligned boost and re-entry	SCCG	Station Communications Control Group (GCF)	SDL	Systems Development Laboratory (JPL)
SADL	Sterilization Assembly Development Laboratory	SCD	S-Band Cassegrain Diplexer	SDP	station data processing
SAE	Society of Automotive Engineers	SCDL	saturated current demand logic	SDR	System Data Record
SAF	Spacecraft Assembly Facility (JPL Building 179)	SCF	Scientific Computing Facility (1108)	SDS	Scientific Data Systems (a computer manufacturer)
SAF	symmetry-adapted function	SCF	self-consistent field	SDS	solar disk simulator
SAG	science analysis group	SCF	Spacecraft Checkout Facility (Cape Kennedy)	SDS	Spacecraft Design Specification
SALT	Strategic Arms Limitation Talks			SDSSE	science data system support equipment
SAM	School of Aerospace Medicine	SCF	standard cubic foot		
SAM	special advisory message	SCF-1	Spacecraft Checkout Facility No. 1 (Building AM, Cape Kennedy)	SDT	Science Data Team
SAMIS	Structural Analysis and Matrix Interpretive System (JPL)	SCF-2	Spacecraft Checkout Facility No. 2 (Building AO, Cape Kennedy)	SE	standard error
SAMMIE	Scheduling Analysis Model for Mission-Integrated Experiments			SE	support equipment
SAMSO	Space and Missile Systems Organization, Los Angeles Air Force Station	SCG	SEMMS Coordinating Group	SE	sustainer engine
		SCID	sub-commutator identification (Pioneer)	SE	System Engineer
				SEAN	strapdown, electrically suspended gyro aerospace navigation (system)

SANP	secondary auxiliary nuclear power	SCISM	Science Subsystem Event Simulator Program (Computer Program)	SEB	Source Evaluation Board
SAO	Smithsonian Astrophysical Observatory	SCL	space-charge-limited	SEC	secondary electron conduction
SAR	Safety Analysis Report	SCLC	space-charge-limited current	SECO	sustainer engine cutoff
SAR	symbol acquisition routine	SCM	S-Band Cassegrain Monopulse (feed cone)	SECOM	School Emergency Communication
SARP	schedule and review procedure	SCO	subcarrier oscillator	Secor	Sequential Correlation (system)
SARV	Satellite Aeromedical Research Vehicle	SCP	station communications processor	SECTAM	Sterile Environmental Control Technology Applications to Medicine
SAS	small astronomy satellites	SCR	silicon-controlled rectifier	SEG	Sequence of Events Generator Program (SFOF)
SASU	Saturn/Apollo Systems Utilization	SCR	Software Change Request	SEIL	Science Experiments Integration Laboratories
SAT	site alteration tests	SCR	spacecraft received time	SEM	scanning electron microscope
SATAN	Satellite Tracking Antenna	SCS	small components structural	SEM	steroscan electron microscope
SATCOM	Committee on Scientific and Technical Communication, National Academy of Sciences	SCS 71	Spacecraft Compatibility/Monitor Station, Cape Kennedy, Florida	SEMMS	Solar Electric Multiple-Mission Spacecraft
SATCOM	Satellite Communications Network	SCSCLC	single-carrier space-charge-limited current	SEP	solar electric power
SATODP	Satellite Tracking Orbit Determination Program (computer program)	SCT	S-Band Cassegrain Transmit (feed cone)	SEP	solar electric propulsion
S-band	frequency band between 1550 and 5200 MHz	SCTS	SFOF Communications Terminal Subsystem (GCF)	SEPST	solar-electric propulsion system test (technology)
SC	simulation co-ordinator	SCTV-GDHS	spacecraft television - ground data handling system	SER	SNAP Experimental Reactor (AEC)
SC	spacecraft	SCU	S-Band Cassegrain Ultra (feed cone)	SERT	space electric rocket test
SC	Statement of Capability (UDS)	SD	standard deviation	SERT	space electronic rocket test
SC	stored command	SD	Station Director (DSIF)	SERV	Space Emergency Reentry Vehicle
SC	Support Chief	SDA	Subcarrier Demodulator Assembly (DSIF)	SESA	Society for Experimental Stress Analysis
S/C	spacecraft (alternate for SC, used by JPL convention)	SDA	Systems Data Analysis	SET	solar energy thermionic (conversion system)
S/C	subcontractor			SETL	Science Experiment Test Laboratory

SFC	space flight center	SMP	Standard Maintenance Procedure	SPINAL	Stimulator, Planetary Instrument Alignment
SFO	Space Flight Operations	SMRD	spin motor rotation detector	SPITS	scan platform inertial thermal simulator
SFOC	Space Flight Operations Complex	SMS	Sequenced Milestone System	SPL	sound-pressure level
SFOD	Space Flight Operations Director	SMT	S-Band Megawatt Transmit (feed cone)	SPL	Spare Parts List
SFOF	Space Flight Operations Facility	SM/V	squared-mean to variance	SPLL	standard phase-locked loop
SFOM	Space Flight Operations Memorandum	SN	serial number	SPM	Standard Practices Manual (DSIF obsolete)
SFOP	Space Flight Operations Plan	S/N	sequence number	SPODP	Single-Precision Orbit Determination Program (SFOF)
SF/UIS	space frame and unit integrating system	S:N	signal-to-noise ratio	SPOP	Scan Platform Operations Program (Computer Program)
SG	sun gate	SNAP	Systems for Nuclear Auxiliary Power	SPPD	Space Propulsion & Power Division (NASA)
SGS	Statistics Gathering System (360/75 program at Houston)	SNORE	signal-to-noise ratio estimator	SPPPM	Surveyor Project Policy and Procedure Manual
SHA	sidereal hour angle	SNPO	Space Nuclear Propulsion Office (NASA)	SPR	S-Band Planetary Radar (feed cone)
SHF	super-high frequency (3 to 30 GHz)	SNR	signal-to-noise ratio (alternate for S:N, used by JPL convention)	SPR	solid-propellant rocket
SHTPB	saturated hydroxy-terminated polybutadiene	SNSO	Space Nuclear Systems Office (AEC-NASA, Germantown, Md.)	SPS	space power system
SI	International System of Units	SNT	system noise temperature	SPS	Space Programs Summary (a discontinued JPL report)
SIC	simulated interface calibration	SOAP	Systems Operational Analysis Plan	SPSC	Signal Processing and Spectral Control
SICS	SFOF Internal Communications Subsystem (GCF)	SOE	sequence of events	SPST	single-pole single-throw (switch)
SID	sudden ionospheric disturbance	SOG	Ship's Operations Group	SPU	S-Band Polar Ultra (feed cone)
SIE	Science Information Exchange (Smithsonian Institution)	SOM	Spacecraft Operations Manual	SPUR	space power unit reactor
SIM	Scientific Instruments Module (Apollo)	SOP	standard operating procedure		
SIM	Simulation Assembly (DSIF)	SOPM	Standard Orbital Parameter Message		
		SOPT	Science Operations Planning Team		
		SOS	sum-of-the-squares		
		SOSE	science operations support equipment		

<b>SIM</b>	Simulation System (DSN)	<b>SOSO</b>	Safety & Operating Systems Office (NASA)	<b>SPV</b>	sun probe near limb of Venus angle
<b>SIMCEN</b>	Simulation Center (DSN)	<b>SOW</b>	Statement of Work	<b>spx</b>	simplex
<b>SINS</b>	Ship's Inertial Navigation System	<b>SP</b>	solar panel	<b>SR/AD</b>	supporting research and advanced development
<b>SIO</b>	Scripps Institute of Oceanography	<b>SP</b>	solid propellant	<b>SRC</b>	Station Reliability Coordinator
<b>SIP</b>	Studies in Process (JPL)	<b>SP</b>	space character (teletype symbol)	<b>SRD</b>	Systems Requirement Document
<b>SIPM</b>	Star Identification Program, Mariner (SFOF IBM 7094)	<b>SPAA</b>	Spacecraft Performance Analysis Area	<b>SRD</b>	Software Requirements Document
<b>SIRD</b>	Support Instrumentation Requirements Document	<b>SPAC</b>	Signal Programmer and Conditioner (AFETR)	<b>SRF</b>	S-band receiver filter
<b>SIRS</b>	satellite infrared spectrometer	<b>SPAC</b>	Spacecraft Performance Analysis and Command	<b>SRI</b>	Stanford Research Institute
<b>SIT</b>	separation-initiated timer	<b>SPAC</b>	Spacecraft Performance Analysis	<b>SRM</b>	System for Resources Management (JPL)
<b>SJM</b>	System Junction Module (DSIF)	<b>SPAC</b>	Space Program Advisory Council	<b>SRO</b>	S-Band Radar Operational (feed cone)
<b>S&amp;L</b>	standards and limits	<b>SPACE</b>	spacecraft ephemeris generation program (SFOF IBM 7094)	<b>SRO</b>	Supervisor of Range Operations
<b>SLAM</b>	surface-launched air missile	<b>SPADATS</b>	Space Detection & Tracking System	<b>SRPO</b>	Sciences Resources Planning Office (National Science Foundation)
<b>SLE</b>	Station Liaison Engineer	<b>SPAN</b>	Solar Particle Alert Network	<b>SRT</b>	Science Recommendation Team
<b>SLIC</b>	System Line Image Composer	<b>SPAN</b>	statistical processing and analysis	<b>SRT</b>	Station Readiness Test
<b>SLS</b>	Surface Laboratory System	<b>SPARS</b>	Space Precision Attitude Reference System	<b>SRT</b>	supporting research and technology
<b>SLTM</b>	structural lander test model	<b>SPASUR</b>	Space Surveillance Detection Net	<b>SR&amp;T</b>	supporting research and technology
<b>SLV</b>	Saturn Launch Vehicle	<b>SPC</b>	stored program controller	<b>SRV</b>	system readiness verification
<b>SM</b>	service module	<b>SPD</b>	S-Band Polarization Diversity (feed cone)	<b>SS</b>	steady state
<b>SM</b>	silver mica	<b>SPDCU</b>	subsurface probe data and control unit	<b>SS</b>	subsystem
<b>SM</b>	Station Manager (DSIF)	<b>SPE</b>	static phase error	<b>SS</b>	sun sensor
<b>SMA</b>	semimajor axis	<b>SPE</b>	Station Project Engineer	<b>SSA</b>	Symbol Synchronizer Assembly (DSIF, SFOF)
<b>SMC</b>	Station Control and Monitor Console Subsystem (DSIF)	<b>SPI</b>	Standard Practice Instructions (JPL)	<b>SSAA</b>	Space Science Analysis Area (SFOF)
<b>SMF</b>	S-Band Multi-Frequency (feed cone)			<b>SSAC</b>	space science analysis and command
<b>SMIT</b>	Simulated Midcourse Interaction Test			<b>SSB</b>	Science Steering Board

SSB	single sideband	STF	Spacecraft Test Facility	TASC	Transportation Association of Southern California
SSB	Source Selection Board	STF	space track facility	TAT	Technology Application Team (NASA)
SSBM	single-sideband modulator	STG	Space Task Group (NASA)	TAT	type-approval test
SSBSC	single-sideband suppressed carrier	STIO	Scientific & Technical Information Office (NASA)	TATRC	Type Approval Test Review Committee
SSC	spacecraft system console	STM	Section Technical Manual (JPL)	TATS	Test and Training Satellite
SSCU	soil sampler control unit	STM	Structural Test Model	TAU	planetary ranging method (DSIF)
SSD	software system design	STOL	Short Takeoff & Landing	TBA	to be announced
SSD	split-screen display	STOM	System Test and Operations Manual	TBD	to be determined
SSDM	System Suppressed Data (computer program)	STOR	System Test and Operations Report	TBE	time base error
SSDPS	Solar System Data Processing System (Computer program)	STP	standard temperature and pressure	TBL	turbulent boundary layer
SSF	Space Simulator Facility	STP	Standard Test Procedure	TBS	to be supplied
SSG	Science Steering Group	STP	System Test Procedure	TC	temperature control
SSMF	symbol sink-matched filter	STS	Spacecraft Telecommunications System	TC	Test Chief
SSO	Space Station Office (NASA Langley Research Center)	STS	system test set	TC	Test Conductor
SSPDA	Surface Sampler Processing and Distribution Assembly	STV	solar thermal vacuum	TC	thermocouple
SSPE	Support System Project Engineer	STVD	spacecraft TV video data	TCA	Thrust Chamber Assembly
SST	subsystem test	SVIC	Shock and Vibration Information Center	TCA	time of closest approach
SSTF	Space Shuttle Task Force (NASA)	SW	short wave	TCC	temperature control circuit
SSTF	Space Station Task Force (NASA)	SW	software	TCD	Telemetry and Command Data Handling Subsystem (DSIF)
SSV	satellite servicing vehicle	Sw	switch	TCD	Terminal Countdown Demonstration (Test)
ST	system test	SWG	standard wire gage	TCFM	Temperature Control Flux Monitor
S/T	straight time	SWR	standing wave ratio (voltage)	TCG	Time Code Generator
STA	S-band test antenna	SWRI	Southwest Research Institute, San Antonio, Texas		

STA	Space Technology Applications	SWS	solar wind spectrometer	TCM	temperature control model
STADAN	Space Tracking and Data Acquisition Network (now incorporated into the Goddard Network)	SWT	supersonic wind tunnel	TCM	thermal control model
STAF	Science Team Analysis Facility	SXA	S/X-band antenna (VOS)	TCM	trajectory correction maneuver (similar to midcourse maneuver)
STA ID	Station Identification	SYN	synthesizer	TC&M	telemetry control and monitoring
STAIR	Structural Analysis Interpretive Routine (Program)	sync	synchronization	TCO	Telemetry and Command Subsystem (DSIF)
STAR	Scientific and Technical Aerospace Reports	sync	synchronizer	TCP	Telemetry and Command Processor Assembly (DSIF)
STAR	Self Testing and Repairing (JPL S/C computer)	sync	synchronous	TCP	tri cresyl phosphate
START	Spacecraft Technology and Advanced Reentry Test	SYNCOM	Synchronous Communications Satellite	TCR	temperature control reference
STC	Satellite Test Center	synfrq	synthesizer frequency	TCSCLC	two-carrier space-charge-limited current
STC	station test and calibration	SYSAD	Systems Adviser	TCSS	Tri-Cone Support Structure
STC	stored time command	SYSCOM	system communications	TCT	time code translator
STC	Systems Test Complex	T	time (interruptible) referenced to an event	TD	technical division
STC	system test configuration	TA	true anomaly	TD	Test Director
STC	system transfer constant	TA	type approval	TD	tolerance detector
STCDHS	Spacecraft Telemetry Command Data Handling System	TAER	time, azimuth, elevation and range	TD	transient detector
STCDS	System Test Complex Data System	TAG	Telemetry System Analysis Group	T-D	Transmitter-Distributor (teletype)
STCE	System Test Complex Equipment	TAM	type-approval model	TDA	target docking adapter
STE	Station Test Equipment (DSIF)	TAN	Tananarive, Malagasy Republic, NASA STADAN Station (MSFN designation)	TDA	Tracking Data Analysis (a computer program)
STEA	System Test Equipment Assembly	TAO	Technology Applications Office (NASA)	TDA	Tracking and Data Acquisition advanced engineering
STEA	system test, evaluation and assembly	TAO	Transportation Applications Office (JPL)	TDA/AE	tracking and data acquisition advanced engineering
STET	System Test Experiments Tape	TAP	Tracking Alarms Processor (SFOF)	TDD	Test Definition Document
STF	s-band transmit filter	TAPE	totally automated programming equipment	TDE	two-dimensional equilibrium

TDH	Tracking Data Handling Subsystem (DSIF)	TJIM	trajectory computer program	TRK	Tracking Data System (SFOF)
TDLR	thermal descent landing radar	TLC	thin layer chromatography	TRK	Tracking System (DSN)
TDM	Technical Direction Memorandum (JPL Form 2084-S)	TLE	transearth injection	TRKI-12	Telemetry Receive/Record Subsystem (AFETR)
TDM	Technical Division Manager	TLI	Trans-Lunar Injection	TRS	tape recorder subsystem
TDM	time division multiplex	TLM	Telemetry Data System (SFOF)	TRS	Traceability and Reporting System
TDO	Technical Divisions Office (JPL)	TLM	Telemetry System (DSN, DSIF)	TRSW	Tracking Data Software Subsystem (SFOF)
TDP	Tracking Data Processor (MSFN equipment at DSIF)	tlm	telemetry	TS	tensile strength
TDR	tracking and data relay	TLMB	telemetry data buffer	TS	transient source
TDRSS	Tracking and Data Relay Satellite System	TLMSW	Telemetry Data Software Subsystem (SFOF)	TSAC	Tracking System Analytical Calibration
TDS	Tracking and Data System	TLU	time of last update	TSAG	Tracking System Analysis Group
TDSCC	Tidbinbilla Deep Space Communications Complex	TM	Technical Manager	TSC	terminal sterilization chamber
TDT	Test Direction Team	TM	Technical Manual	TSC	thermally stimulated current
TE	trajectory engineer	TM	Technical Memorandum	TSC	thermal sterilization chamber
TE	transverse electric (mode or wave)	TM	telemetry	TSE	test support equipment
TEL-4	AFETR Merritt Island Telemetry Station	TM	transverse magnetic (mode or wave)	TSF	Terminal Sterilization Facility
TELB	telemetry (teletype) data buffer (7044)	TM	true mean	TSF	track synthesis frequency
TEM	thermoelectric module	TMCC	time-multiplexed communications channel	TSG	Timing Systems Group
TEM	transverse electromagnetic (mode or wave)	TMG	transmogrification	TSI	Test Support Instruction
		TMRAO	Table Mountain Radio Astronomy Observatory	TSO	Terminator Sensor Output
		TOM	Tracking Operation Memorandum (obsolete)	TSP	Technical Support Packages (JPL)
		TOOMBA	Cooley Creek, Australia, NASA STADAN Station	TSP	telemetry simulation program
				TSP	Test Support Position
				TSS	Teletype Switching System

TER	Test Evaluation Report	TOP	Test and Operations Plan	TSSDT	Thrust Subsystem Design Team
TEST	Thesaurus of Engineering and Scientific Terms	TOPS	Thermoelectric Outer Planet Spacecraft	TST	Telemetry Simulation Terminal
TETM	thermal effects tests model	TOS	Technical Operational Support	TTL	transistor-transistor logic
TEX	Corpus Christi, Texas, NASA MSFN Station	TP	Test Procedure (DSIF)	TTM	temperature test model
TFL	time from launch (post)	TPBK	tape block	TTM	thermal test model
TFR	Traveler/Failure Report (DSIF)	TPC	tangential period correction	TTS	Teletypewriter System (GCF)
TFR	tunable frequency range	TPDB	tape deblock	TTS	Test and Training Satellite
TFSS	Technical Facilities Subsystem (SFOF)	TPG	teletype preamble generator	TTTA	Teletypewriter Terminal Assembly (GCF)
TFT	thin-film transistor	TPOLY	Timing Polynomial Computer Program	TTY	teletypewriter
TGA	thermogravimetric analysis	TPR	Test Phase Report	TTYA	Teletypewriter Assembly (GCF)
TGD	Technical Guidance Directions	TPS	telemetry processing station	TUO	Technology Utilization Office (NASA)
TGL	Task Group Leader	TPS	Telemetry Processing System (SFOF)	TV	television
TICA	Tactical Intercom Assembly (GCF)	TPSB	Telemetry Processing System Buffer	TVCA	Thrust Vector Control Assembly
TID	traveling ionospheric disturbances	TR	Technical Report	TVCS	Television Communications Subsystem
TIDD	Technical Information and Documentation Division	T-R	transformer-rectifier	TVGDHS	Television Ground Data Handling System
TIG	time of ignition	T-R	Transmit-Receive	TVI	television interference
TIG	tungsten inert gas	TRACE	tracking and communications (extra terrestrial)	TVID	television frame identification data
TIM	Tracking Information Memorandum	TRADAC	trajectory determination and acquisition computation	TVS	Television Subsystem (S/C)
TIM	Tracking Instruction Manual	TRAG	Tracking System Analysis Group	TVSA	Television Assembly (GCF)
TIROS	Television Infrared Observation Satellite	TRAP	test and repair processor	TWM	traveling-wave maser
TIS	Telemetry Input System; Technical Information System	TRD	Trapped Radiation Detector	TWT	traveling-wave tube
TIU	Time Isolation Unit	TRF	tuned radio frequency	TWTA	traveling-wave tube amplifier
				TWU	Technical Writing Unit
				TWX	teletypewriter message
				TXR	Transmitter Subsystem (DSIF)

UAMS	Upper Atmosphere Mars Spectrometer	V-band	frequency band between 46.0 and 56.0 GHz	VTVM	vacuum-tube voltmeter
UC	usable control	VCM	volatile condensable materials	W	west (longitude)
UDL	update link	VCO	voltage-controlled oscillator	W	wideband data (2400 bps to 500 kHz)
UDOP	ultrahigh-frequency doppler system	VCS	Viking change status	WA	workmanship assurance
UDS	Universal Documentation System	VCS	Voice System (GCF)	WAD	Work Authorization Document
UDT	user display terminal	VCXO	voltage-controlled crystal oscillator	WANL	Westinghouse Astronuclear Laboratory
UDTC	user-dependent-type code	VDA	Valve Drive Amplifier	WAR	Work Acquisition Routine
UF-F	universal flip-flop	VDR	Validated Data Record	WB	wideband
UHF	ultra-high frequency (300 to 3000 MHz)	VECO	vernier engine cutoff	W-band	frequency band between 56.0 and 100.0 GHz
UHTPB	unsaturated hydroxy-terminated polybutadiene	VEV	vernier engine vibration	WBCL	wideband communications line
UI	user interface	VF	video frequency	WBCL	wideband communications line
UIS	universal isolation switch	VFO	variable-frequency oscillator	WBFS	Wide-Band Communications Subsystem
U/L	uplink	VFO	Viking Flight Operations	WBDA	Wideband Data Assembly (GCF)
ULO	Unmanned Launch Operations (Kennedy Space Center)	VFSW	variable-frequency sine wave	WBDL	wide-band data line
UMTA	Urban Mass Transportation Administration (Dept of Transportation)	VFTG	voice frequency telegraph gear	WBFM	wideband frequency modulation
UNIPAC	universal payload accommodation capsule	VHF	very high frequency (30 to 300 MHz)	WBS	Wideband System (GCF)
UOC	ultimate operational capability	VIB	Vertical Integration Building	WBS	Work Breakdown Structure (JPL)
UPS	Uninterruptible Power Supply (SFOF)	VIC	Viking integrated change	WBVCXO	wideband voltage-controlled crystal oscillator
		VID	Video Image Display Assembly (SFOF)	WCSC	West Coast Switching Center (JPL support for NASCOM)
		VIS	Visual Imagery System (VOS)	WDT	watch dog timer
		VKF	von Karman gas dynamic facility	W/F	wow and flutter
		VL	Viking Lander	WG	waveguide
		VLBI	very long baseline interferometry		
		VLC	Viking Lander Capsule		
		VLF	very low frequency (3 to 30 kHz)		

USAF/NRD	United States Air Force, National Range Division (Andrews Air Force Base, Md, and Patrick Air Force Base, Fla)	VLS	Viking Lander System	WGDC	waveguide directional coupler
		VNG	Frequency and Time Broadcasting Station, Lindherst, Victoria, Australia	WHOI	Woods Hole Oceanographic Institution
USB	Unified S-Band System	VO	Viking Orbiter (VOS)	WIN	Work Incentive Program
USB	upper sideband	VOCA	Voice Communications Assembly (GCF)	WPM	words per minute
USI	User Software Integration Subsystem (SFOF)	VODC	Viking Orbiter Design Change (VOS)	WRE	Weapons Research Establishment (Australian Department of Supply)
USNO	United States Naval Observatory	VOS	Viking Orbiter System	WS	Wallops Station (Wallops Island, Va.)
USP	Urban Studies Project	VOX	voice-operated transmission	WS	word sync
USR	User Service Request	VPO	Viking Project Office	WSMR	White Sands Missile Range
USRA	Universities Space Research Association	VPS	Vernier Propulsion System	WSMTC	White Sands Missile Test Center (White Sands, N.M.)
UT	umbilical tower	VR	voltage regulator	WSTF	White Sands Test Facility
UT	Universal Time (appended numerals indicate corrections applied)	VRCA	Voice Recording Assembly (GCF)	WT	wind tunnel
UTC	Universal Time Code	VRCC	Vandenberg Communications Control Center	WTR	(see AFWTR)
UTC	United Technology Center, Inc	VRS	Voice Recording Subsystem	WUE	Work Unit Engineer
UTD	User Terminal and Display Subsystem (SFOF)	VRU	velocity reference unit	WUIS	Work Unit Information System (DOD)
UTM	universal transverse Mercator	VSA	velocity sensor antenna	WUM	Work Unit Manager
UV	ultraviolet	VSB	vestigial sideband	WWV	National Bureau of Standards Broadcasting Station, Ft. Collins, Colorado (2.5, 5.0, 10.0, 15.0 and 25.0 MHz)
UVS	ultraviolet spectrometer	V-S/C	Viking Spacecraft	WWVB	National Bureau of Standards Broadcasting Station, Ft. Collins, Colorado (60 kHz)
UWV	Antenna Microwave Subsystem (DSIF)	VSCF	variable-speed constant-frequency	WWVH	National Bureau of Standards Broadcasting Station, Kauai, Hawaii (2.5, 5.0, 10.0 and 15.0 MHz)
V	voice data	VSD	video subcarrier detector		
VAB	Vehicle Assembly Building	VSO	very stable oscillator		
VAC	volts alternating current	VSS	video storage subsystem		
VAN	Vanguard (Apollo Ship)	VST	Video System Test		
		VSWR	voltage standing wave ratio		
		VT	variable-time (fuse)		
		VTR	video tape recorder		

<b>WWVL</b>	National Bureau of Standards Experimental Broadcasting Station, Ft. Collins, Colorado (20 kHz)	<b>XM</b>	experimental model	<b>XTM</b>	experimental test model
<b>XA</b>	ground transmitter VCO frequency for S/C receiver best lock, doppler compensated	<b>xmit</b>	transmit	<b>XTX</b>	X-band transmitter
<b>X-band</b>	frequency band between 5.2 and 10.9 GHz	<b>xmtr</b>	transmitter	<b>x-y</b>	x axis - y axis (type of antenna mounting)
<b>XCE</b>	X-band Cassegrain Experimental (feed cone)	<b>xpndr</b>	transponder	<b>YIG</b>	yttrium iron garnet
<b>xcvr</b>	transceiver	<b>XRD</b>	X-ray diffractometer	<b>Z</b>	Zulu Time (GMT)
<b>xfr</b>	transfer	<b>XRPM</b>	Experimenter's Data Reformatting (computer program)	<b>ZDD</b>	zero delay device
		<b>XRPT</b>	Experimenter's Data Reformatting Program for System Test Data (computer program)	<b>ZEPL</b>	zero excess propellants line
		<b>xtal</b>	crystal	<b>ZF</b>	zero frequency
				<b>ZST</b>	Zone Standard Time
				<b>ZWC</b>	zero word count

NASA — JPL — Coml., L.A., Calif.